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Summary of Comments and Responses on the May 22, 1980 Proposed Regulations for Visibility Protection for Federal Class I Areas

PEDCo-Environmental, Inc.
Cincinnati, OH

Prepared for

Environmental Protection Agency
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This report summarizes the comments received on the proposed Visibility Regulations and accompanying guidelines by major issue. It also provides discussion of EPA's position on these issues and subsequent changes to the final rules.

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by

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Contract No. 68-02-3512

Prepared for

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Air, Noise, and Radiation
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

October 1980

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SECTION 1

INTRODUCTION

The Environmental Protection Agency (EPA) proposed rulemaking to protect visibility for Federal Class I areas on May 22, 1980 at p. 34762 of the Federal Register. This proposed rulemaking was required by Section 169A of the Clean Air Act (the Act) with the goal of "...the prevention of any future, and the remedying of any existing, impairment of visibility in mandatory Class I Federal areas which impairment results from manmade air pollution."

These regulations (1) require States to consider visibility protection for mandatory Class I Federal areas including integral vistas, (2) require certain existing stationary facilities to be analyzed for and in some cases to install the Best Available Retrofit Technology (BART) for controlling those pollutants which cause visibility impairment, (3) require States to identify, evaluate, and adopt long-term strategies for making reasonable progress toward remedying existing and preventing future impairment in the mandatory Class I Federal areas, and (4) require the adoption of certain measures that will supplement the States new source review program regarding visibility impact.

There were a total of 383 comments received from the public. There were also fourteen comments submitted through Congressional channels; these are IV-C-3 through IV-C-16 and may be found in the Docket. The comments received by way of members of Congress are summarized in Appendix A.

As part of this report, the comments have been summarized and major issues by the commenters have been identified. A summary of responses to the comments has also been included in this report. The commenters fell into five major groups: private citizens, citizen and environmental groups; agricultural and forestry organizations; private industry and industrial associations; and government agencies or representatives--Federal, State, and local.

There were 138 comments from private citizens. The vast majority of these comments were highly supportive of the proposed regulations, but only a few commented on the specific details in the proposed regulations. Many of the citizens expressed support for the concept of integral vistas. Some of the citizens commented on the lack of an adequate monitoring program, and urged further development in this area. There were eight citizens which recommended that the role of the Federal Land Manager be strengthened in the regulations. Some citizens opposed the regulation of prescribed burning.

There were twenty-two comments from citizen and environmental organizations. Most of these commenters were supportive of the proposed regulations, and many had substantive comments concerning particular aspects of the proposed regulations. The comments ranged from the need for increased monitoring efforts to giving the Federal Land Manager the principal role in the identification of integral vistas. The comments by this group were very similar to those submitted by many private citizens.

A total of thirty-one comments were received from foresters and agricultural or forestry organizations. Virtually all of these commenters were concerned with the regulation of prescribed burning, and they were all opposed to any further requirements to control burning beyond that which might be now imposed by a State agency.

There were 134 comments from private companies or organizations representing private companies. Of these, forty-four were public utilities. Most, but not all of the commenters opposed the proposed regulations in general. The comments from this group were very diverse and very detailed and they covered virtually every aspect of the regulations from the definition of visibility impairment to the concept of integral vistas.

Comments from State, Federal, and local governments or their agencies totaled fifty-four. The majority of the comments from local governments were concerning the impact of the regulations on the local economy, and the commenters felt the effect would be negative. The comments from State and Federal government dealt with their respective roles in the proposed regulations. They also provided a variety of substantive technical comments. Almost all government commenters, other than some State and local agencies, strongly supported these proposed regulations.

The involvement of the FLM in the visibility regulations and the concept of "integral vistas" were by far the two most frequent issues raised in comments. There was also a considerable amount of concern over the BART requirements and the need for more guidance and data to implement the visibility program.

SECTION 2

IDENTIFICATION OF MAJOR ISSUES

Major issues were identified as a result of the comments received on the May 22, 1980, Proposed Regulations on Visibility Protection for Federal Class I areas. These issues covered a variety of topics and touched on many aspects of the proposed regulations and supporting material or guidelines. The following subsections briefly summarize the major issues in order to have a clear understanding of the basic concerns raised by the commenters. The actual summaries of the comments by major issue and subissue are presented in a series of tables in Section 3. This section is intended as a key to explain the headings on the tables in Section 3.

2.1 DEFINITIONS OF "VISIBILITY IMPAIRMENT"

Most of the comments on definitions dealt with "visibility impairment" and related terms. The majority of these comments were negative with respect to certain terms used in the definition. The most frequently raised issues are listed in Section 3.

2.1.1 "Human Perception"

Many comments were concerned with the meaning or application of the term "human perception" of visibility impairment. This term appears in the definition of "visibility impairment," and restricts the perceptibility to the observation by humans. Many of the comments related to the subjectivity of this term.

2.1.2 Any vs. Significant

Several of the comments received stated that, rather than the term "any" in the definition of "visibility impairment," a substitution of "significant" should be made. There were several different types of comments related to this which are grouped in the summary.

2.1.3 Definition of "Adverse Impact"

The definition of "adverse impact" is closely related to that of "significant impairment," as was noted by several commenters. "Adverse impact" also has a particular application in the regulations in § 51.307, which made it the subject of comments.

2.1.4 "Natural Conditions"

There were a significant number of comments on the definition of natural conditions. These comments were summarized, and in some cases the commenters offered an alternate definition.

2.2 DEFINITION OF "STATIONARY SOURCE"

The definition of "stationary source" is related to the Alabama Power decision; this and other relevant points were raised by the commenters.

2.2.1 Regulated vs. Any Pollutant

Several comments were received concerning the terms "any air pollutant" in the definition of stationary source. There were also comments as to what "regulated" should refer to in this rulemaking.

2.2.2 "Reconstruction"

Although "reconstruction" is a separate definition, it is closely related to that of stationary source, and refers to a stationary source.

2.2.3 "Potential to Emit"

The definition of "potential to emit" also refers to "stationary source." Comments concerning this definition were made several times relative to the Alabama Power decision.

2.3 RESPONSIBILITIES OF THE FEDERAL LAND MANAGERS

Various aspects of the role of the Federal Land Manager in the proposed regulations prompted a variety of comments. The Federal Land Manager was identified as a participant in § 51.302, § 51.303, § 51.304, § 51.305, § 51,306, and § 51.307 of the proposed regulations.

2.3.1 Affirmative Responsibilities

The way in which the role of the Federal Land Manager was perceived in the proposed regulations, and that role as it appears in Sections 165 and 169A of the Act was the subject of numerous comments. These comments varied from supportive of the Federal Land Manager's role in the proposed regulations to highly critical of that role.

2.3.2 Approval/Disapproval

Several commenters expressed concern over the amount of decisionmaking authority given to the Federal Land Manager in the proposed regulations.

2.3.3 PSD

The role of the Federal Land Manager in § 51.307 was the subject of some debate. The implementation of that role was also commented upon.

2.3.4 Involvement/Noninvolvement

The involvement or noninvolvement of the FLM in the various aspects of the visibility regulations were commented upon. In addition, the degree of involvement, e.g., SIP revisions, § 51.302, was commented upon by individuals and representatives of citizen's groups, government, and industry.

2.4 INTEGRAL VISTAS

Section 51.304 and § 51.307 of the proposed regulations deal with or have portions dealing with integral vistas. Numerous comments were made concerning this concept.

2.4.1 Not Authorized

One area of concern for many commenters was that the concept of integral vistas was not authorized in the Clean Air Act either explicitly or implicitly.

2.4.2 Better Procedures

Many commenters felt there were better procedures available for the identification of integral vistas or that better procedures could be developed. Comments were made on the procedures as they appeared in the guideline, "Criteria for the Identification of Integral Vistas" (draft).

2.4.3 Secretary of the Interior vs. State

The Federal Land Manager (defined in the regulations as the Secretary) was given a substantial role in the proposed regulations to identify and protect integral vistas for Federal Class I areas. There were comments both pro and con on the level of involvement in identifying and protecting integral vistas by the Federal Land Manager.

2.4.4 Burden on Planning New Sources

Some commenters stated the various aspects of integral vistas, as proposed in the regulations, would place an undue burden on the planning and siting of new sources. A summary of these comments is included in Section 3.

2.5 LONG-TERM STRATEGIES

Section 51.306 calls for the State to include a long-term strategy in their State Implementation Plan (SIP) revision for visibility and to explain how they will progress towards the national goal set by Congress. Comments were received concerning the requirements outlined in this section of the proposed regulation.

2.5.1 Existing

A variety of comments were received on the inclusion of existing sources long-term strategy. The SIP revision must address certain areas of the long-term strategy as they relate to other than BART sources causing visibility impairment. Comments were summarized dealing with this aspect as identified in § 51.302 and § 51.306.

2.5.2 New Source

The proposed regulations require the SIP revision to include a plan for the long-term strategy of dealing with new sources which may impair visibility or impact integral vistas.

2.5.3 Periodic Review

The long-term strategy section requires that the plan shall provide for a periodic review and for revision as appropriate at least every three years. Comments were made concerning what this review should include and concerning the frequency of the review in the proposed regulations.

2.6 BEST AVAILABLE RETROFIT TECHNOLOGY

The requirement to apply Best Available Retrofit Technology (BART) to existing sources is in § 51.302. Numerous comments were received on various aspects of BART as presented in the proposed regulations.

2.6.1 Timing

There were comments concerning the time period available for the Federal Land Manager to identify candidate sources for BART analysis. There were also comments on the time available for an SIP revision.

2.6.2 Impact on All Sources

Most of the comments on BART analysis were from industry or industrial organizations. There was concern about the impact, on sources which may be identified for the purpose of applying BART.

2.6.3 Reanalysis

The Section 51.306(e) requirement in the long-term strategy to perform a reanalysis of BART for a pollutant not previously controlled generated numerous comments.

2.6.4 Cost

The cost of BART as applied to various industries was commented upon. These comments were from industry, citizens, and citizen's groups.

2.6.5 FLM Involvement

The involvement of the Federal Land Manager in the BART process was commented upon by government agencies, States, citizens, and industry.

2.6.6 State Responsibility

State responsibility in the BART process was addressed by several commenters.

2.7 PRESCRIBED BURNING

The requirement for the long-term strategy developed by a State to include smoke management techniques for prescribed burning is in § 51.306(f)(5). A very large number of comments were received on this issue.

2.7.1 Not a Major Source

Many commenters stated that prescribed burning is not a major source.

2.7.2 Preferable to Wildfire

Most commenters stated that prescribed burning is preferable to wildfire.

2.7.3 Forest Management

The point was frequently made in the comments that prescribed burning is part of good forest management practices.

2.7.4 Preferable to Chemical and Mechanical Methods

The point was made by several commenters that the use of prescribed burning is preferable to either chemical or mechanical methods of land clearing and preparation. They felt it was better to use prescribed burning from both ecological and energy standpoints.

2.7.5 Beyond the Intent of Congress

Several comments were made that the regulation of prescribed burning was beyond the intent of Congress in Section 169A of the Act.

2.7.6 Fire-Natural

The point was made that fire is natural to all areas where prescribed burning is practiced and that part of the smoke produced should be considered natural background.

2.8 PHASED APPROACH

As stated in the preamble, the Agency has taken a phased approach to visibility protection. These regulations limit the scope of the program to Phase I or to obvious forms of impairment. This approach was favored by most commenters.

2.8.1 Does Not Provide Adequate Time for SIP Development or BART

The inclusion of specific time requirements for SIP development and for BART was questioned by some commenters while others felt that the time allowed and the substance in the proposed regulation were adequate.

2.8.2 Specific Date for Phase II

Some comments suggested that a specific date for Phase II regulations should be promulgated.

2.9 TECHNICAL GUIDANCE

The Agency has issued technical guideline documents in connection with the proposed regulations, and received a number of comments on these guidelines. The guidelines discuss modeling, monitoring, and BART.

2.9.1 Modeling

Comments were made concerning the currently available models for visibility and the EPA guideline. Many of these comments dealt specifically with the limitations of these models.

2.9.2 Monitoring

Comments were made concerning the currently available visibility monitoring techniques and the EPA guideline.

2.9.3 Lack of Technical Tools

Several commenters felt the present tools available to assess or predict visibility impairment are not adequate.

2.10 NEW SOURCE REVIEW

Section 51.307 of the proposed regulations deal with new source review and requirements for visibility protection.

2.10.1 Lack of Coordination

There is a requirement for a State plan in which provisions must be made for coordination with the Federal Land Managers on certain aspects of the new source permit application. Some commenters felt that the procedures for the coordination between the FLMs and the States were not clearly defined leaving some uncertainty on the order and type of actions each should or may take in the new source review process.

2.10.2 Inconsistancies in Definitions

Some commenters felt there were inconsistancies in definitions for "adverse impact" and for other terms as they are applied to the PSD program.

2.10.3 Tools to Implement Provisions Dealing with Impact on Visibility

There were comments concerning the availability and usefulness of guidance documents to predict and evaluate the impact on visibility by proposed new sources.

2.10.4 Inhibits Growth

Some concern was expressed that, if the proposed regulations were implemented for new source review, they would inhibit growth and development. The regulations, as proposed, would complicate new source siting, and therefore inhibit new growth and development.

2.10.5 Fugitive Emissions

There were several comments concerning the inclusion of fugitive emissions in the proposed regulations. Some commenters felt fugitive emissions should not be addressed in this rulemaking.

2.11 COSTS VERSUS BENEFITS

There were several comments on various interpretations of costs versus benefits of the visibility regulations. These comments dealt primarily with benefits to be derived from the protection of visibility in mandatory Class I Federal areas in terms of the overall costs.

2.11.1 Assessing Improvement

Comments were received relating to the ability to assess improvement in visibility impairment and to what that assessment would mean.

2.11.2 Reasonable Attribution

There were comments dealing with what the "reasonable attribution" to visibility may mean in terms of economic impact.

The commenters' concern was primarily with the number of facilities which may have to install BART. There were comments concerning what benefits could be achieved at given or stated costs for these sources.

2.11.3 ICF Analysis

The "Preliminary Assessment of Economic Impact of Visibility Regulations" (draft Report by ICF, Inc.), was the subject of several comments. Many aspects of this report were challenged, and critical comments were provided.

2.12 IDENTIFICATION UNDER SECTION 169A(a)(2) OF MANDATORY CLASS I FEDERAL AREAS IN WHICH VISIBILITY IS AN IMPORTANT VALUE

A few commenters expressed concern over the November 30, 1979, identification of mandatory Class I Federal area in which visibility is an important value under Section 169A(a)(2).

2.13 MISCELLANEOUS

There were other topics commented on frequently which did not fit into the other categories.

2.13.1 NSO's and Visibility

Section 119 of the Act provides for administrative orders that would postpone final compliance for certain nonferrous smelters with SO_2 emission limits. Several commenters made statements on the inclusion or exclusion of visibility requirements for nonferrous smelters in these orders.

2.13.2 Reversibility of Visibility Impairment

There were comments on the fact that visibility impairment is a reversible phenomenon, as opposed to other types of air pollution effects.

2.13.3 Impact on Future Class I Areas

The possibility of the impact of visibility impairment or the regulation thereof on Class I areas identified in the future was presented by several commenters.

SECTION 3

SUMMARY OF COMMENTS BY ISSUE

The following tables contain the comments summarized for major issues. The left vertical column of the table lists the commenter and the identifying number for the comment. Across the top of the table is the subissue identified in the comments. A brief statement was made in the appropriate column if the comment appeared to differ with or elaborate on the title of the subissue. However, if the comment was brief and essentially the same as the identified subissue only an "x" is provided.

Not all comments appear in these summary tables, since the tables deal only with major issues and subissues. A summary of all comments by commenters is in Appendix A.

TABLE 3-1. SUMMARY OF COMMENTS

Definition of Visibility Impairment

Commenter:	Concept: Pro/Con	Human Perception	Any vs. significant	Definition of adverse impact	Natural conditions	Other
Texaco, Inc. IV-D-329			"Any" could lead to a changing definition with new monitoring techniques. Should be "man-caused" change.		Regulations are not feasible because difference between "existing" and "natural" conditions cannot be measured.	Public appreciation of scenic quality, visual air quality, visual range, and atmospheric discoloration are not equivalent visibility parameters.
Salt River Project IV-D-267	C		"Significant" already quantified in "visibility impairment."	Same as "significant" comment.		Too subjective.
Arizona Public Service Company IV-D-298	C	Because of random nature - only if people perceived a change in statistics of indicator (e.g. average range).	Reference to "management, protection, preservation, or enjoyment" should be deleted.		Should delete. Background visibility concept should be developed.	No definition is accurately presented. Definitions should contain definite standards.
Ursenbach, Univ. of Utah Research Institute IV-D-232	C		"Significant"--no less than 10% of average baseline visual range.			"Baseline" in arid and semi-arid SW be no more than 72 miles with an uncertainty of 10%.

(continued)

TABLE 3-1. SUMMARY OF COMMENTS

Definition of Visibility Impairment

Commenter:	Concept: Pro/Con	Human Perception	Any vs. significant	Definition of adverse impact	Natural conditions	Other
Western Forestry Conservation Assoc. IV-D-197	P				Unclear. What are criteria? Frequency of occurrence and duration of all kinds of weather should be used.	
Oregon Forest Protection Assoc. IV-D-116	C				Unclear, what are criteria?	
Cunningham, Sierra Club, Rocky Mtn. Chapter IV-D-183	P		Use instrumentation in definition.			
Governor, Wyoming IV-D-163			Significant is is vague term.	Vague.		State's interpretation should be mandatory.
Oregon Seed Council IV-D-173	C	Goes beyond the requirements of the Act.	Should be significant, not any.			
Pacific Power & Light Company IV-D-240	C		"Significant" and "adverse" have almost same meaning.			
U.S. Dept. of Commerce IV-D-242	C			Terms - subjective.		

(continued)

TABLE 3-1. SUMMARY OF COMMENTS

Definition of Visibility Impairment

Commenter:	Concept: Pro/Con	Human Perception	Any vs. significant	Definition of adverse impact	Natural conditions	Other
American Petroleum Institute IV-D-243	C	Opposes term.	Opposes terms in definition. Opposes terms "management", "protection" & "preservation".			Definition cannot be scientifically supported.
Hutchins, Citizen IV-D-3			"Significant" not mentioned in the Act.			Needs better definition.
El Paso Gas IV-D-28	C				Natural and existing conditions confusing terms.	
NCASI IV-D-74	C					Proposed different version of definition.
Missouri Dept. of Natural Resources IV-D-81	P			Not clear.		Too subjective.
Chemical Manufacturer's Assoc. IV-D-158	C	Vague.			Vague.	
Jacksonville Electric Authority IV-D-258	C	A technical specification is needed.			Method for determining is needed.	

(continued)

TABLE 3-1. SUMMARY OF COMMENTS

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Definition of Visibility Impairment

Commenter:	Concept: Pro/Con	Human Perception	Any vs. significant	Definition of adverse impact	Natural conditions	Other
Shell Oil Company IV-D-260	C	Subjective. Present instrumentation does not relate.		"Significant impairment" has same definition as "adverse".		Modeling techniques are not verified.
General Electric IV-D-261	C	Should not depend on human perception.			Vaguely defined.	Vague.
API/NFPA IV-D-273	C		Definition should include the word "significant".	Definition should include the word "significant".	Should refer to "change in visual range".	
Union Oil Company of California IV-D-274			"Any" was not envisioned by Congress.			Should refer to interference with public enjoyment.
National Coal Association IV-D-280	C		"Significant" should account for times and frequency that visitors might view the scene.			"Contrast" should not be included.
South Carolina Public Service Authority IV-D-282	C		No distinguishing between "significant" or "adverse" impairment.	What is adverse and what is acceptable?		No basis for valuing an incremental change in visibility - value/cost ratio.

(continued)

TABLE 3-1. SUMMARY OF COMMENTS

Definition of Visibility Impairment

Commenter:	Concept: Pro/Con	Human Perception	Any vs. significant	Definition of adverse impact	Natural conditions	Other
American Public Power Assoc. IV-D-286	C	Change definition to "attributably" by means of visual observation and other monitoring techniques.				Visual observation is very subjective. To what extent will visual observation be used to make a determination?
Tampa Electric Co. IV-D-289	C	Subjective.				
Western Regional Council IV-D-311	C	Subjective.			Will vary greatly.	No scientific definition. No isolatable point of perception.
Pacific Gas and Electric IV-D-312	C	Subjective.				How can data be acquired and quantified?
National Coal Assoc. IV-D-313	C		"Significant" should make allowance for amount of visitor use in area.			"Contrast" should not be included.
Brunswick Pulp & Paper IV-D-315					Drop "natural conditions" from the definition.	Change definition to include terms "management", "protection", and "preservation" - caused by manmade sources.

(continued)

TABLE 3-1. SUMMARY OF COMMENTS

Definition of Visibility Impairment

Commenter:	Concept: Pro/Con	Human Perception	Any vs. significant	Definition of adverse impact	Natural conditions	Other
Potlatch Corp. IV-D-324	P					Inadequate.
Dept. of Agriculture IV-D-336	P					Revise to include FLM's role.
Tuscon Electric Power Company IV-D-290	C		Significant is too vague.		Definition inadequate.	
Grimm, Montana Power Co. IV-F-22				And definition of "significant" are not adequately qualified or quantified - vague and ambiguous.		

(continued)

TABLE 3-1. SUMMARY OF COMMENTS

Definition of Visibility Impairment

Commenter:	Concept: Pro/Con	Human Perception	Any vs. significant	Definition of adverse impact	Natural conditions	Other
Trisko, Stern Bros, Inc. IV-F-11	C			Overly broad-should include test "visibility impairment which, in the judgement of the Administrator, substantially interferes with the management, protection, preservation, or enjoyment of the mandatory Class I area..."		
Chapman, Atlantic-Richfield Co. IV-D-287	C			"Significant impairment" and "adverse impact" must be quantified to some degree.		Suggested definition of "visibility impairment" is a long-term change in the atmosphere from that which would exist under baseline conditions, as virtually perceived by an average person.

(continued)

TABLE 3-1. SUMMARY OF COMMENTS

Definition of Visibility Impairment

Commenter:	Concept: Pro/Con	Human Perception	Any vs. significant	Definition of adverse impact	Natural conditions	Other
Pesonen, Director Calif. Dept. of Forestry IV-D-214	P			Should be revised to be consistent with "visibility impairment" and role of FLM.		Definition of visibility impairment should be deleted.
Foster, Chevron, USA IV-F-27	C		Definition of "significant impairment" is good.			Should define as a visually perceptible impairment which is considered significant or adverse.
Thielke, Puget Sound Power & Light Co. IV-F-17	C	Should be based on visitor related perspective rather than model oriented techniques.		Should be revised "... visibility impairment which, in the judgement of the Administrator, unreasonably interferes with..."		

(continued)

TABLE 3-1. SUMMARY OF COMMENTS

Definition of Visibility Impairment

Commenter:	Concept: Pro/Con	Human Perception	Any vs. significant	Definition of adverse impact	Natural conditions	Other
International Paper IV-D-225	C					
Kaiser Refractories IV-D-219	C					Vague.
American Textile Mfg. IV-D-276	C					How will baseline be established?
Utah International IV-D-262				Too vague.		
Santa Fe Research IV-D-249			Opposes definition of significant impact			
Southern California Gas IV-F-10					Disagree.	
Weyerhaeuser IV-D-265			Significant		Not sure how to determine.	
Texas Eastern IV-D-257			Significant			
National Parks & Conservation IV-D-277	P					Supports definition.

(continued)

TABLE 3-1. SUMMARY OF COMMENTS

Definition of Visibility Impairment

Commenter:	Concept: Pro/Con	Human Perception	Any vs. significant	Definition of adverse impact	Natural conditions	Other
Colorado Mountain Club IV-D-178			Redefine significant.			
Tenn. Gas Trans. IV-D-331	C	No standard to measure against.				
State of Utah IV-F-23	C				Impossible to define.	
Pacific Power & Light IV-F-29	C	Unclear meaning.	Draw distinction between.			
Sierra Club IV-D-303	P					Desire numerical index for visual perception.
Holland & Hart IV-D-275	C	Need method for implementing.			No methods to measure.	
DOI IV-D-326	P	X	Significant should consider park visitor use days.	X	Too vague.	
Hunton & Williams IV-D-300				Need guidance on meaning of visual range, contrast, and coloration.	Need more guidance.	

TABLE 3-2. SUMMARY OF COMMENTS

Definition of Stationary Source

Commenter:	Concept: Pro/Con	Regulated vs. any pollutant	Reconstruction	Potential to emit	Other
Washington Dept. of Natural Resources IV-D-26	P				Prescribed burning should be distinguished from stationary sources.
Salt River Project IV-D-267	C			Definition not realistic.	Prescribed burning should be treated as a point source.
Arizona Public Service Company IV-D-298	C	Pollutant not related to visibility impairment should not be included.		Should consider Alabama Power decision.	
Public Service Co. of Colorado IV-F-26	C			No plant operates continuously - year 'round	EPA should not condition a permit with limiting hours of operation.
El Paso Gas IV-D-28	C			Opposes the definition.	
Bunker Hill IV-D-170, 170(a)	C		Reconstructed sources should be grandfathered also. Not following intent of Congress		
American Mining Congress IV-D-229	C		Reference to reconstructed source was not in the Act.		

(continued)

TABLE 3-2. SUMMARY OF COMMENTS

Definition of Stationary Source

Commenter:	Concept: Pro/Con	Regulated vs. any pollutant	Reconstruction	Potential to emit	Other
U.S. Department of Commerce IV-D-242	P				Concerned about the inclusion of fugitive emissions in the definition of major source. Further clarification is needed.
General Electric IV-D-261	C			Should be consistent with the PSD regulations.	
API/NFPA IV-D-273	C			*Alabama Power* decision does not justify or include EPA's definition.	
AMAX, Inc. IV-D-279	C			Not given justification to include fugitive emissions in the definition.	
Potlatch Corp. IV-D-324	P			Definition inadequate.	
Templeton, Kennecott Corp. IV-F-30	C		Congress specifically excluded smelters constructed before August 7, 1962.		

(continued)

TABLE 3-2. SUMMARY OF COMMENTS

Definition of Stationary Source

Commenter:	Concept: Pro/Con	Regulated vs. any pollutant	Reconstruction	Potential to emit	Other
Foster, Chevron, USA IV-F-27	C				Should include only those owned and operated by one person and located on contiguous properties and: 1) have same three first digit SIC codes, 2) dependent upon or affect the process of each other, and 3) involve a common raw material or product.
Merck & Co. IV-D-307	C		Opposes.		
Southern California Gas Co. IV-F-10	C			Disagree.	
Weyerhaeuser IV-D-265	C			Disagree with fugitive emissions	
Commonwealth of VA Air Pollution Control Board IV-D-256	C				Confusing.
Magna Copper IV-D-164			Opposes.		

(continued)

TABLE 3-2. SUMMARY OF COMMENTS

Definition of Stationary Source

Commenter:	Concept: Pro/Con	Regulated vs. any pollutant	Reconstruction	Potential to emit	Other
Holland & Hart IV-D-275			Opposes.		
DOI IV-D-326	P	Any pollutant.			
Hunton & Williams IV-D-271				Adopt PSD definition.	

TABLE 3-3. SUMMARY OF COMMENTS

Responsibilities of FLM

Commenter:	Concept Pro/Con	Affirmative responsibility	Approval/ disapproval	PSD	Involvement/ non-involvement	Other
Petrie, Illinois Institute of Natural Resources IV-D-259	P	Role of FLM in implementing protection not sufficiently defined.		Time for review insufficient.		
Salt River Project IV-D-267	C	Responsibility should not be shared - should be State's.	Opposes role in exemption process		FLM should not identify visibility impairment. FLM should not consult on BART.	
Arizona Public Service Company IV-D-298	C	FLM role far exceeds Congress contemplated.			Rarely have the expertise to determine cause of impairment. State should not be required to consult on entire SIP.	
Dyer, Olympic Park Association IV-D-215	P	FLM responsibility rather than State.		Role is too limited.		
Tate, Idaho State Grange IV-D-216	C				State/local government should have total control.	
Werner, Citizen IV-D-231	C	FLM should have authority, best qualified.				
Cunningham, Sierra Club, Rocky Mtn. Chapter IV-D-183	P	Responsibilities of FLM/State not clearly delineated.	Meaning of consultation in 51.307 (g) not clear. Who makes decision?			

(continued)

TABLE 3-3. SUMMARY OF COMMENTS

Responsibilities of FLM

Commenter:	Concept Pro/Con	Affirmative responsibility	Approval/ disapproval	PSD	Involvement/ non-involvement	Other
Western Oil and Gas Assoc. IV-D-188	C		Opposes determinations on exemptions. State should have final word.		Opposes authority outside their jurisdiction without energy and economic considerations.	
Hutchins, Citizen IV-D-3	P	Identifying impairment in Class I area - not State, only FLM.				
El Paso Gas IV-D-28	C			Allowing 30 days for I.D. of integral vista should be eliminated.		Should not recommend integral vista site.
Michigan Botanical Club IV-D-30	P			Should have 1 yr, not 30 days.		
League of Women Voters of U.S. IV-D-58	P				Should identify the integral vistas.	
United Power Assoc. IV-D-65	C				What does FLM use as criteria in determining natural conditions?	

(continued)

TABLE 3-3. SUMMARY OF COMMENTS

Responsibilities of FLM

Commenter:	Concept Pro/Con	Affirmative responsibility	Approval/ disapproval	PSD	Involvement/ non-involvement	Other
NCASI IV-D-74	C					FLM's shall not select BART sources on visual basis.
Missouri Dept. of Natural Resources IV-D-81	C	Who has responsibility for determination, FLM or State?		FLM should not have veto power. Who would resolve disputes between FLM & State?	FLM should only be involved on exception.	
Rees, Citizen IV-D-109	P	Should conduct visibility assessment for new sources.		Should have 1 yr. to review permits.	Should have clear-defined role.	
League of Women Voters of Texas IV-D-113	P				Role should be clarified.	
Wilderness Workshop of Colorado IV-D-137	P			FLM should have veto power.		Should not be a 90 day limit in 51.302 (c)(2)(i) & (ii). Automatic updates to SIP's as land plans are completed.
Marion, Citizen IV-D-147	P			Should have 1 yr. not 30 days.	Role of FLM should be strengthened and clarified.	Allowed too much latitude in designation of integral vista.

(continued)

TABLE 3-3. SUMMARY OF COMMENTS

Responsibilities of FLM

Commenter:	Concept Pro/Con	Affirmative responsibility	Approval/ disapproval	PSD	Involvement/ non-involvement	Other
Governor, Wyoming IV-D-163	C			State should be final authority.	Should not be involved in SIP revision.	
Pettit, Citizen IV-D-167	P			Should have 1 yr., not 30 days.		
Kerr-McGee IV-D-174	C				Should not be involved in BART analysis.	Opposes definition of FLM.
Montana Power Co. IV-D-175	C			FLM should not participate.		Integral vistas ident. should be delayed until Dec. 31, 1985 by FLM.
City of Colorado Springs IV-D-198	C	Over non-Federal land under integral vista - no.			Should not be involved: BART, visibility monitoring program.	
Boise Cascade Corp. IV-D-203	C				Should not determine visibility impairment; should be advisory not decisionmaking.	

(continued)

TABLE 3-3. SUMMARY OF COMMENTS

Responsibilities of FLM

Commenter:	Concept Pro/Con	Affirmative responsibility	Approval/ disapproval	PSD	Involvement/ non-involvement	Other
Governor Janklow, North Dakota IV-D-218	C				States should have final authority.	Will FLM be responsible for monitoring?
Kane County Comm. (Utah) IV-D-226	C				Too much authority.	
American Mining Congress IV-D-229	C				No authority for consultation over BART in the Act.	Opposes definition of FLM in regulations. "Designated agents" is not consistent with language in §302 of Act.
Pacific Power & Light Company IV-D-240	C	Should be required to render opinion on exemption in fixed no. of days.		FLM involvement is unnecessary.	FLM too much authority in BART.	
Florida Power & Light Co. IV-D-255	C				FLM should not identify impairment which result in BART analysis. Not recommend sources for BART. Primary role in integral vistas.	
Jacksonville Elec. Authority IV-D-258	C				Reduces State's authority.	FLM does not have staff to do what is in the regulations.

(continued)

TABLE 3-3. SUMMARY OF COMMENTS

Responsibilities of FLM

Commenter:	Concept Pro/Con	Affirmative responsibility	Approval/ disapproval	PSD	Involvement/ non-involvement	Other
General Electric IV-D-261	C				State not FLM should select BART sources.	
API/NFPA IV-D-273	C			FLM has too much power.		
AMAX, Inc. IV-D-279	C	Consultation should be suggested, not mandated, for State.			FLM should not be involved in the SIP revision process. FLM should do no more than comment to State on BART.	
National Coal Assoc. IV-D-280	C			Has indirect control over future energy development.	FLM should not select integral vistas.	Powers are vague in regulations.
South Carolina Public Service Authority IV-D-282	C				Review by FLM of exemption - reduces flexibility.	
Arizona Dept. of Health Services, Env. Health IV-D-285	C	Should not have any responsibility for visibility program - SIP.			FLM has part of States authority. Should not have to consult on BART or visibility monitoring.	

(continued)

TABLE 3-3. SUMMARY OF COMMENTS

Responsibilities of FLM

Commenter:	Concept Pro/Con	Affirmative responsibility	Approval/ disapproval	PSD	Involvement/ non-involvement	Other
American Public Power Assoc. IV-D-286	C		Should not have approval/disapproval of PSD permit.	Have unauthorized responsibilities.	Do not have technical expertise to perform BART. Not proper person to identify integral vistas.	
Tampa Electric Co. IV-D-289	C			Preconstruction review is unwarranted and unjustified.		
Basin Electric Power Coop. IV-D-292	C	Identification of integral vistas redesignation of non-Federal land to Federal control.				
Western Regional Council IV-D-311	C	Sole responsibility for designation of integral vistas should be State's.	Only States can reclassify areas as Class I. FLM should have no veto power over States in redesignation of Class I areas.		BART and ident. of BART sources should be left up to States.	

(continued)

TABLE 3-3. SUMMARY OF COMMENTS

Responsibilities of FLM

Commenter:	Concept Pro/Con	Affirmative responsibility	Approval/ disapproval	PSD	Involvement/ non-involvement	Other
National Coal Assoc. IV-D-313	C	Ident. of integral vistas gives too much power to FLM.	Denial of new source permit not Congressional intent.	Could have major impact on energy development, since FLM can identify added sites for integral vistas after submittal of PSD application.		
Dept. of Conservation and Natural Resources, Div. of Env. Prot., Nevada IV-D-316	C	Designation of integral vista should not be up FLM.			Undue authority given to FLM.	
Potlatch Corp. IV-D-324	C		Given only authority in the "exemption" section. Should not be given veto power over selection of Class I areas.		Should be reduced to consultation role.	Not qualified to make air pollution decision.

(continued)

TABLE 3-3. SUMMARY OF COMMENTS

Responsibilities of FLM

Commenter:	Concept Pro/Con	Affirmative responsibility	Approval/ disapproval	PSD	Involvement/ non-involvement	Other
U.S.D.A. IV-D-336	P	FLM will develop a land management planning process to establish prescriptions for Class I integral vistas.		Sources should be required to consult with FLM in advance of permit.		
Davis & Davis, Citizens IV-D-350	P		FLM should make final decision on integral vista sites.			More defined and aggressive role for FLM in visibility protection.
Benioff, Citizen IV-D-351	P				FLM should implement visibility protection.	
Heckel, Citizen IV-D-353	P					Better defined and more aggressive role for implementing visibility protection.
Public Service Co. of Colorado IV-F-26	C				Consultation on SIP not supported in Act on BART or integral vista.	Does not have technical ability to perform functions.
Southwest Environmental Services IV-F-12	P				Long-term concurrence of FLM on SIP should be required.	

(continued)

TABLE 3-3. SUMMARY OF COMMENTS

Responsibilities of FLM

Commenter:	Concept Pro/Con	Affirmative responsibility	Approval/ disapproval	PSD	Involvement/ non-involvement	Other
National Coal Assoc. IV-F-6	C			Could stop new projects by identifying new integral vista.		Gives significant authority to FLM.
Tuscon Electric Power Co. IV-D-290	C		Allowing veto power over existing sources is illegal.			
Pesonen, Director Calif. Dept. of Forestry IV-D-214	P				90 day period for identification of visibility impairment is insufficient - should be 1 yr.	
Fielding, Mgr. Air Quality Programs API/NFPA IV-F-8	C					EPA should review the DOI workbooks on determining visibility. EPA should perform a critical review.
Reid, Citizen IV-D-248	P			Burden of proof for adverse impact should be placed on developer.	Should play a major role in determining adverse impact.	

(continued)

TABLE 3-3. SUMMARY OF COMMENTS

Responsibilities of FLM

Commenter:	Concept Pro/Con	Affirmative responsibility	Approval/ disapproval	PSD	Involvement/ non-involvement	Other
Breault, Citizen IV-D-251	P				Should have more clearly defined and aggressive role.	
Chapman, Atlantic-Richfield Co. IV-D-287	C		Veto power over exemption too much authority.			
Fikar, Texas Utilities Services, Inc. IV-D-330	C				Should be kept informed, but State should make all decisions.	
McGee, Citizen IV-D-343	P		Approve.			
Cate, Citizen IV-D-345	P	X	Approve.		Active involvement.	
Pardee, Citizen IV-D-189		Park superintendent.				
Utah International IV-D-262					Involvement in decisionmaking goes too far.	
National Parks and Conservation IV-D-277					Clearly spell out involvement when increments are exceeded. Stronger role.	Need more than 3 days to review application.

(continued)

TABLE 3-3. SUMMARY OF COMMENTS

Responsibilities of FLM

Commenter:	Concept Pro/Con	Affirmative responsibility	Approval/ disapproval	PSD	Involvement/ non-involvement	Other
National Assoc. of State Foresters IV-F-15					Non-FLM land managers should also be involved.	
Walker, Citizen IV-D-186	P	X			Involvement/ review permits.	
Southern Arizona Hiking Club IV-D-182	P	X				
Heath, Citizen IV-D-36	P	Strong role.				
Morgan, Citizen IV-D-39	P	Aggressive role.				
Warrow, Citizen IV-D-40	P				More time to review.	
Liberty National Life Insurance IV-D-50	P	Key role.				
Frazer, Citizen IV-D-52	P	X				
McConnochie, Citizen IV-D-53	P	X				
Hamilton, Citizen IV-D-54	P	X				

(continued)

TABLE 3-3. SUMMARY OF COMMENTS

Responsibilities of FLM

Commenter:	Concept Pro/Con	Affirmative responsibility	Approval/ disapproval	PSD	Involvement/ non-involvement	Other
Pollard, Conservation Call IV-D-70	P	X				
Ciak, Citizen IV-D-71	P	X				
Rivers, Citizen IV-D-75	P	X				
Barry & Corbin, Citizen IV-D-82	P	X				
Brennan, Citizen IV-D-84	P	X				
Thorniley, Citizen IV-D-86	P	X				
Culp, Citizen IV-D-99	P	X				
NE Area State Foresters and State Forester-Ill. IV-D-340						Non FLM should be involved also.
Bensinger, Video Info. IV-D-342	P	X				
State of Montana IV-D-306	P					30 days inadequate i terms of review.

(continued)

TABLE 3-3. SUMMARY OF COMMENTS

Responsibilities of FLM

Commenter:	Concept Pro/Con	Affirmative responsibility	Approval/ disapproval	PSD	Involvement/ non-involvement	Other
New, Citizen IV-D-56	P	X				
Yarbrough, Citizen IV-D-57	P	X				
Montana Dept. of Natural Resources IV-D-240	P					Extend to non-Federal Land Managers.
State of Utah IV-F-23	C				More State involvement.	
Pacific Power & Light IV-F-29	C	FLM only involved as interested party.				
Evans, Kitchel & Jenckes IV-D-136	C				Too much consultation. Beyond Act. No role in BART.	
Sierra Club IV-D-303	P					Regulations seem to inhibit FLM.
Friends of the Earth IV-F-3	P				Need more than 30 days to review	Need index develope by FLM to judge adverse impact.
Friends of the Earth IV-D-211	P	X	Should have			
Warner, Citizen IV-D-61	P	X				

(continued)

TABLE 3-3. SUMMARY OF COMMENTS

Responsibilities of FLM

Commenter:	Concept Pro/Con	Affirmative responsibility	Approval/ disapproval	PSD	Involvement/ non-involvement	Other
Holland & Hart IV-D-275	C	Outside authority of Act.			State have primary authority.	
DOI IV-D-326	P	X				Cannot consider non-air quality factors.
Hunton & Williams IV-D-271	C	X			Unlawful injection of FLM into many parts of regulations.	

TABLE 3-4. SUMMARY OF COMMENTS

Integral Vistas

Commenter:	Concept: Pro/Con	Not authorized	Better procedures	Secretary of Interior vs. State	Burden on planning new source	Other
L.D. McFarland Co. IV-D-270	C	X				Visibility protection should have limited restriction on industrial and forest management.
Texaco, Inc. IV-D-329	C	X	Judgement highly subjective. Does not account for economic factors.		Could have a negative effect on energy dependence, costs, national security.	Guidelines and regulations encourage FLM to identify as many vistas as possible.
Salt River Project IV-D-267	C	X				
Arizona Public Service Co. IV-D-298	C	Illegally extends limits set by Congress. Contravenes mandated responsibilities of FLM - multiple use of land.	Panel of observers should be used. There should be "degrees" or priorities for fulfilling criteria. Standardized methods for monitoring. Terms need to be improved and refined.	Extends authority to FLM over privately held land. State should not be required to revise SIP each time FLM identifies vista. FLM should identify not propose vista.		Conflicts with establishment of Class I, II, III areas.

(continued)

TABLE 3-4. SUMMARY OF COMMENTS

Integral Vistas

Commenter:	Concept: Pro/Con	Not authorized	Better procedures	Secretary of Interior vs. State	Burden on planning new source	Other
Occidental Oil Shale, Inc. IV-D-192	C			Leaves no discretion to States. Impinges on State's right to determine land use. FLM should not be given exclusive discretion in designating vistas.		
Menpen, Citizen IV-D-205	P					
Reece, Utah Audubon Society IV-D-208	P					Needed in Utah because of pressures to develop natural resources.
Wicker, Citizen IV-D-253	P					Necessary.
Petrie, Ill. Institute of Natural Resources IV-D-259	P					Consistent with purpose of park and wilderness.
American Iron and Steel Institute IV-D-18	C					Might leave very little land unregulated.

(continued)

TABLE 3-4. SUMMARY OF COMMENTS

Integral Vistas

Commenter:	Concept: Pro/Con	Not authorized	Better procedures	Secretary of Interior vs. State	Burden on planning new source	Other
Cole & Krauss, Washington Dept. of Natural Resources IV-D-26	C	X				
Town of Crested Butte, Colorado IV-D-27	P		Criteria are vague.	FLM designation of integral vista is undesirable		Concerned about whether vista is part of reason park created--criteria for integral vista.
Oregon Forest Protection Assoc. IV-D-116	C	X				Inconsistent with 169A "prevention in Class I area". Not in best interest of citizens.
Brown Company IV-D-236	C				Companies which recently complied with PSD should be recognized. Unreasonable to impose additional requirements.	

(continued)

TABLE 3-4. SUMMARY OF COMMENTS

Integral Vistas

Commenter:	Concept: Pro/Con	Not authorized	Better procedures	Secretary of Interior vs. State	Burden on planning new source	Other
Ursenbach, University of Utah, Research Institute IV-D-232	C					Long-range transport of natural causes and urban and industrial centers will impact and nullify benefit from restrictions on neighboring sources.
Western Forestry and Conservation Association IV-D-197	C	X				Does not seem in best interest of citizens.
Kamp, Citizen IV-D-213	P	Is consistent with Congressional goal.		Supports provision to allow FLM 30 days to identify integral vistas after notification of a new source permit.		
Dyer, Olympic Park Association IV-D-215	P					Protect vistas outside looking in. Cites specific problem from industrial growth near Olympic National Park.

(continued)

TABLE 3-4. SUMMARY OF COMMENTS

Integral Vistas

Commenter:	Concept: Pro/Con	Not authorized	Better procedures	Secretary of Interior vs. State	Burden on planning new source	Other
Brantly, Florida Game and Fresh Water Fish Commission, IV-D-223	C		There are other remedies under the Act which can be used to protect the vistas.			
Werner, Citizen IV-D-231	P			FLM is best qualified to determine need for protection. Should have authority.		Some vistas already impaired.
Levy, Citizen IV-D-233	P	Is mandated by Congress.				
Denison, Oregon Women for Timber IV-D-234	C		Few voices from "public" do not represent majority needs.			
South Dakota Dept. of Game, Fish and Parks IV-D-1	C	X				
Hutchins, Citizen IV-D-3	C	X				
El Paso Gas IV-D-28	C				X	30 days to identify - inadequate.

(continued)

TABLE 3-4. SUMMARY OF COMMENTS

Integral Vistas

Commenter:	Concept: Pro/Con	Not authorized	Better procedures	Secretary of Interior vs. State	Burden on planning new source	Other
Anglemyer, Citizen IV-D-31	P					
WEST Assoc. IV-D-34	C	X				
League of Women Voters of U.S. IV-D-58	P			FLM should identify.		
United Power Assoc. IV-D-65	C	X				
NCASI IV-D-74	C	X				Extends boundaries of Class I areas. Conflicts with PSD regulations.
Fla. Dept. of Ag. & Consumer Service IV-D-120	C	X				State now has authority to protect.
Wilderness Workshop of Colorado IV-D-137	P					
Burlington - Northern IV-D-143	C					Creates adverse economic impact. Extends Class I to non-Federal lands.

(continued)

TABLE 3-4. SUMMARY OF COMMENTS

Integral Vistas

Commenter:	Concept: Pro/Con	Not authorized	Better procedures	Secretary of Interior vs. State	Burden on planning new source	Other
Spell, Citizen IV-D-144	P					
Marion, Citizen IV-D-147	P		Criteria should be set.	Allows too much latitude to FLM		
Chemical Manufacturers Assoc. IB-D-158	C	X				Violates Section 169A(e) of the Act.
Bunker Hill IV-D-170, 170(a)	C	X				
Crown-Zellerbach IV-D-171	C	X				
Oregon Seed Council IV-D-173	C	Section 169A prohibits automatic buffer zone.				What would impact be on Class II, III or nonattainment areas?
Kerr McGee IV-D-174	C	X				Cites a statement by Costle from the Congressional record.
Montana Power Co. IV-D-175	C	X		FLM should not identify until Dec. 31, 1985.		
Air Resources Bd. State of Calif. IV-D-177	C					Could have major economic impact. Could encompass too large an area or areas.

(continued)

TABLE 3-4. SUMMARY OF COMMENTS

Integral Vistas

Commenter:	Concept: Pro/Con	Not authorized	Better procedures	Secretary of Interior vs. State	Burden on planning new source	Other
No Oilport Inc. IV-D-196	P					
City of Colorado Springs IV-D-198	C	X		Authority of FLM would go beyond Federal lands.	Would inhibit growth.	1.4 million acres Fed. Class I in Colorado - I.V. would add another 52 million.
Boise-Cascade IV-D-203	C	X				Because the plume is visible from a Class I area does not mean it causes impairment within a Class I area.
Gov. Janklow, North Dakota IV-D-218	C	X		States should participate in selection of integral vistas.		
Kane County Commission IV-D-226	C					
American Mining Congress IV-D-229	C	X				Act is not ambiguous. Plain language "visibility in".
Pacific Power & Light Company IV-D-240	C	Not clear meaning of Act. Prohibits automatic buffer zones.				

(continued)

TABLE 3-4. SUMMARY OF COMMENTS

Integral Vistas

Commenter:	Concept: Pro/Con	Not authorized	Better procedures	Secretary of Interior vs. State	Burden on planning new source	Other
American Petroleum Institute IV-D-243	C		Should be a rigorous screening process before designation.			There should be an economic assessment of the potential impact.
Florida Power & Light IV-D-255	C	X		FLM should not have primary role in identifying integral vista.		
Shell Oil IV-D-260	C	X			Will foreclose major U.S. areas to energy and mineral resources development.	Other programs--PSD, NSPS, & SIP--should be sufficient. Should conduct an economic impact analysis.
General Electric IV-D-261	C	X				Boundaries of mandatory Federal Class I areas enlarged.
Missouri Dept. of Natural Resources IV-D-81	C					

(continued)

TABLE 3-4. SUMMARY OF COMMENTS

Integral Vistas

Commenter:	Concept: Pro/Con	Not authorized	Better procedures	Secretary of Interior vs. State	Burden on planning new source	Other
Virginia Electric & Power Co. IV-D-272	C	X		No need to identify new integral vistas in future.	Would restrict development. Selection of new integral vista could delay PSD process.	Would be a tremendous economic impact.
API/NFPA IV-D-273	C	X	Guidance document not substantive. Should be formal rulemaking for each integral vista.	Extends veto power to FLM over PSD permit		Economic analysis was not performed.
AMAX, Inc. IV-D-279	C	X		States not FLM should identify the vistas.		
National Coal Association IV-D-280	C	X		Too much authority to the FLM.		
American Public Power Assoc. IV-D-286	C	X		Identification of integral vista outside Federal area - FLM not appropriate.		May not be necessary because of BART.

(continued)

TABLE 3-4. SUMMARY OF COMMENTS

Integral Vistas

Commenter:	Concept: Pro/Con	Not authorized	Better procedures	Secretary of Interior vs. State	Burden on planning new source	Other
Tampa Electric IV-D-289	C	X				
Basin Electric Power Coop. IV-D-292	C	X		Giving FLM authority over non-Federal land.	EPA-mandating location of new facilities further and further from Class I areas.	EPA should limit application of the regulations.
Western Regional Council IV-D-311	C	X				
Atlantic Richfield Company IV-D-310	C	X				Unlawful geographical extention of the visibility regulations.
Pacific Gas & Elec. IV-D-312	C		Time frame for I.D. is too short. No clear guidance is given.			Fugitive dust from roads should not be included.
National Coal Association IV-D-313	C	X	Each integral vista should be subject to separate rule-making.	Methods of selection give too much power to FLM.	Could have major impact on energy development.	

(continued)

TABLE 3-4. SUMMARY OF COMMENTS

Integral Vistas

Commenter:	Concept: Pro/Con	Not authorized	Better procedures	Secretary of Interior vs. State	Burden on planning new source	Other
Brunswick Pulp & Paper IV-D-315	C		Public should participate in selection process.			
Dept. of Conservation & Natural Resources, State of Nevada. IV-D-316	P			Site should be selected by State only.		
Potlatch Corp. IV-D-324	C	X				Would cause enormous economic and environmental problems.
U.S.D.A. IV-D-336	C	X		FLM should make site selection.		Should be postponed (if implemented at all) until December 31, 1985.
Potomac Electric Power IV-D-347	C	X				
Bunder(?), Citizen IV-D-349	P			Nat. Park Service should have active role.		

(continued)

TABLE 3-4. SUMMARY OF COMMENTS

Integral Vistas

Commenter:	Concept: Pro/Con	Not authorized	Better procedures	Secretary of Interior vs. State	Burden on planning new source	Other
Davis & Davis, Citizens IV-D-350	P			FLM should make final site selection.		EPA should propose to include outside looking into Federal area.
Heckel, Citizen IV-D-353	P					Economics & Energy should not be considered. Protect vistas outside looking in Federal areas.
Public Service Co. of Colorado IV-F-26	C	X		FLM should not identify site.		
National Coal Association IV-F-6	C	X			Jeopardizing new energy development in the West.	FLM could stop new projects by identifying an area as "integral vista". Extends boundaries of Class I Federal areas.
Tuscon Electric Power Co. IV-D-290	C	X				
National Parks & Conservation Assoc IV-D-277	P			FLM should have responsibility to determine. More aggressive role.		Out-in in addition to in-out. Energy and economic consideration second priority.
National Assoc. of State Foresters IV-F-15	C	X				

(continued)

TABLE 3-4. SUMMARY OF COMMENTS

Integral Vistas

Commenter:	Concept: Pro/Con	Not authorized	Better procedures	Secretary of Interior vs. State	Burden on planning new source	Other
Skinner, Citizen IV-D-190	P		X			More policy with regard to integral vistas is needed.
Annerino, Citizen IV-D-191	P		X			Improve vistas.
Walker, Citizen IV-D-186	P					Supports concept.
Colorado Mountain Club IV-D-178	P					Out-in also.
Southern Arizona Hiking Club IV-D-182	P		Support guideline document.			
Heath, Citizen IV-D-36	P					
Crump, Citizen IV-D-37	P					
Morgan, Citizen IV-D-39	P					
Warrow, Citizen IV-D-40	P					
Stansfield, Citizen IV-D-41	P					

(continued)

TABLE 3-4. SUMMARY OF COMMENTS

Integral Vistas

Commenter:	Concept: Pro/Con	Not authorized	Better procedures	Secretary of Interior vs. State	Burden on planning new source	Other
Teas, Citizen IV-D-44	P					
Liberty National Life Insurance IV-D-50	P					
Frazer, Citizen IV-D-52	P					
McConnochie, Citizen IV-D-53	P					
Hamilton, Citizen IV-D-54	P					
New, Citizen IV-D-56	P					
Yarbrough, Citizen IV-D-57	P					
Warner, Citizen IV-D-61	P					
Gailey, Citizen IV-D-64	P					
Ciak, Citizen IV-D-71	P					

(continued)

TABLE 3-4. SUMMARY OF COMMENTS

Integral Vistas

Commenter:	Concept: Pro/Con	Not authorized	Better procedures	Secretary of Interior vs. State	Burden on planning new source	Other
Rivers, Citizen IV-D-75	P					
Barry & Corbin, Citizen IV-D-82	P					
Brennan, Citizen IV-D-84	P					
State Forester, Oregon IV-D-85	C	X				
Thoeniley, Citizen IV-D-86	P					
Chapman, Atlantic-Richfield IV-D-287	C	X	5 years to identify is too long.		Could have severe adverse impacts on energy development in the Western States.	2 years for State plan after FLM identifies integral vista would be preferable.
Fikar, Texas Utilities Services Inc. IV-D-330	C					All references to "integral vistas" should be removed.

(continued)

TABLE 3-4. SUMMARY OF COMMENTS

Integral Vistas

Commenter:	Concept: Pro/Con	Not authorized	Better procedures	Secretary of Interior vs. State	Burden on planning new source	Other
Grimm, Montana Power Co. IV-F-22	C					Questions concept.
Pesonen, Director Calif. Dept. of Forestry IV-D-214	C		Should require that view be related to the fundamental purpose for which area was established.			Should not include areas outside Class I areas. Should not be protected to same extent as mandatory Class I areas.
Fielding, Mgr., Air Quality Programs API/NFPA IV-F-8	C	Outside mandatory Class I Federal areas.	Any proposal to identify should be publicly announced - public comment period and public hearings.			
Reid, Citizen IV-D-248	P					Protect all areas even if outside park.
Breault IV-D-251	P					Should include vistas outside park looking from within.
Troland, Citizen IV-D-346	P					

(continued)

TABLE 3-4. SUMMARY OF COMMENTS

Integral Vistas

Commenter:	Concept: Pro/Con	Not authorized	Better procedures	Secretary of Interior vs. State	Burden on planning new source	Other
Templeton, Kennecott Corp. IV-F-30	C	Congress limited §169A to Class I areas only.				
Foster, Chevron USA IV-F-27	C					Should be deleted from the regulations.
Thielke, Puget Sound Power & Light Co. IV-F-17	C					Should not be included until further direction by Congress.
Trisko, Stern Bros., Inc. IV-F-11	C				Will eliminate dozens & perhaps hundreds of potential minemouth power plant sites in Western coal and oil shale reserve areas.	
Merck & Co. IV-D-307	C					Delete vistas.
Southern California Gas IV-F-10	C	X				

(continued)

TABLE 3-4. SUMMARY OF COMMENTS

Integral Vistas

Commenter:	Concept: Pro/Con	Not authorized	Better procedures	Secretary of Interior vs. State	Burden on planning new source	Other
Cities Service IV-D-335	C	X				
Weyerhaeuser IV-D-265	C	X				
Texas Eastern IV-D-257	C				X	
Commonwealth of VA State Air Pollution Control Bd. IV-D-256	C	Disagrees with interpretation.				
California Forest Protective Assoc. IV-D-293	C	X				
Guenter, Citizen IV-F-21	P			FLM should have authority and time.		Out/In should also be included.
Jones, Citizen IV-D-187	P					
McGree, Citizen IV-D-343	P			FLM should identify.		
Cate, Citizen IV-D-345	P			FLM should identify - aggressive role.		Out/In should also be included.

(continued)

TABLE 3-4. SUMMARY OF COMMENTS

Integral Vistas

Commenter:	Concept: Pro/Con	Not authorized	Better procedures	Secretary of Interior vs. State	Burden on planning new source	Other
Pardee, Citizen IV-D-189	P					
Burgess, Citizen IV-D-281	P					
Associated Oregon Ind. IV-D-319	C	X				
Mead Corp. IV-D-309	C	X				
Virginia Mfg. Assoc IV-D-239	C	X		State should review FLM determination.		
International Paper IV-D-225	C	X				
Kaiser Refractories IV-D-219	C	X				
Rio Blanco Oil Shale IV-D-266	P			Disagree that FLM can add until 1982.		
American Textile Mfg. IV-D-276	C	X				

(continued)

TABLE 3-4. SUMMARY OF COMMENTS

Integral Vistas

Commenter:	Concept: Pro/Con	Not authorized	Better procedures	Secretary of Interior vs. State	Burden on planning new source	Other
Coleman Furniture IV-D-301	C	X				
Sunoco Energy IV-D-268	C	X				
Standard Oil IV-D-241		X				
Integral Vistas IV-D-262	C					Object to allowance of 5 years to identify.
State of Utah IV-F-23	C	X	X			Impact is significant.
Pacific Power & Light IV-F-29	C	X				
State of Utah IV-D-291	C	Objects				
Evans, Kitchel & Jenckes IV-D-136	C	X				
Dept. of Interior IV-D-278a	P					State determine vistas. Other factors cannot be considered in identifying vistas.

(continued)

TABLE 3-4. SUMMARY OF COMMENTS

Integral Vistas

Commenter:	Concept: Pro/Con	Not authorized	Better procedures	Secretary of Interior vs. State	Burden on planning new source	Other
Council on Wage and Price Stability IV-D-278				State should identify.		Costs may outweigh benefits. Five year identification creates uncertainty.
National Coal Assoc IV-D-299	C	Questionable. Object concept.				
McBride, St. Regis Paper IV-D-97	C					Opposes concept.
Culp, Citizen IV-D-99	P					In-Out only.
Tenn. Gas Trans. IV-D-331	C	X				
Sebastion, Citizen IV-D-337	P					
Bensinger, Video Info. IV-D-342	P					
Trisko IV-D-105	C					Extend Class I area up to 100 km.
State of Montana IV-D-306	C	Not sure if authorized.				
Kennecott Copper IV-D-156	C	X				Opposes concept.

(continued)

TABLE 3-4. SUMMARY OF COMMENTS

Integral Vistas

Commenter:	Concept: Pro/Con	Not authorized	Better procedures	Secretary of Interior vs. State	Burden on planning new source	Other
Montana Dept. of Natural Resources IV-D-240	P					
Friends of the Earth IV-D-211	P	Strongly support.	X			
Holland & Hart IV-D-275	C	X	X			
DOI IV-D-326		Reexamine legal premise for protecting integral vistas.	Guideline not needed. FLM will develop their own guidance.			Reservations about whether proposal provides for balancing of factors with respect to integral vistas. Vistas are important. Need out-to-in also. 90 day initial identification period inadequate.
Hunton & Williams IV-D-271		X	More time needed to identify and list vistas.			All vistas should be listed at one time.
Hunton & Williams IV-D-300			Revise guideline. Procedures not clear.			

(continued)

TABLE 3-4. SUMMARY OF COMMENTS

Integral Vistas

Commenter:	Concept: Pro/Con	Not authorized	Better procedures	Secretary of Interior vs. State	Burden on planning new source	Other
Deborah Morningstar IV-D-43	P					
Sidney M. Hirsh IV-D-48	P					Judgement of vistas should depend on preservation of resources rather than energy or economic consideration.
Robert Franz IV-D-55	P					90 day period to identify not long enough.
Karin Tiberg IV-D-89	P					
Frances Dollar IV-D-35	P					
Bert Barry IV-D-341	P					Judgement on vistas should depend on preservation of resources rather than energy or economic considerations.
Oregon Forest Protection Assoc. IV-D-176	C	X				Identifying should be subject to public comment.

TABLE 3-5. SUMMARY OF COMMENTS

Long-term Strategies

Commenter:	Concept: Pro/Con	Existing	New sources	Periodic review	Other
Texaco, Inc. IV-D-329	C				No guidance to States is offered.
Salt River Project IV-D-267	C				No validated models. Congress did not intend for State to consult with FLM.
Arizona Public Service Company IV-D-298	P	BART reanalysis exposes source to retrofit requirements. Not intended by Congress.		Should apply only to regulated pollutants causing visibility impairment.	
Amax, Inc. IV-D-279	C	Act does not authorize reanalysis of BART.		3 yrs seems excessive.	Unduly interferes with State prerogative.
Basin Electirc Cooperative IV-D-292	C	Forcing BART because of a new source would be unfair and unconstitutional.	It is unfair to consider the effect of an existing source (or even a pre-Aug. 7, 62 source) in conjunction with a new source.		
U.S.D.A. IV-D-336	P			Change from 3 to 5 yrs.	
San Diego Gas & Electric IV-D-339	P				Entire regulations should be studied more.

(continued)

TABLE 3-5. SUMMARY OF COMMENTS

Long-term Strategies

Commenter:	Concept: Pro/Con	Existing	New sources	Periodic review	Other
Southwest Environmental Service IV-F-12	P			All SIP revisions should be reviewed for visibility impact. Should include specific objectives as well as a schedule.	Regulations must include required improvements in visibility. Concurrence of FLM should be required on any SIP revision.
WEST IV-F-9	P		EPA should adopt a 5 year plan to study costs to consumer.		
Puget Sound Power & Light Company IV-C-5	P				Should reformulate the basic long-term approach from a deterministic, model oriented technique to statistical, visitor related perspective.
League of Women Voters of U.S. IV-D-58	P				Requirements are vague.
Montana State Airshed Group IV-D-193	P				Non-federal land managers should be included in the process.
Pesonen, Director Calif. Dept. of Forestry IV-D-214	P			Change to not less than five years.	

(continued)

TABLE 3-5. SUMMARY OF COMMENTS

Long-term Strategies

Commenter:	Concept: Pro/Con	Existing	New sources	Periodic review	Other
Chapman, Atlantic-Richfield IV-D-287	C				Inappropriate to consider while remains much work to be done in basic understanding and documentation.
DuPont IV-D-318					Delete 51.306(d)(2) or modify to allow flexibility to consider local circumstances.
Sierra Club IV-D-303	P				

TABLE 3-6. SUMMARY OF COMMENTS

BART

Commenter:	Concept: Pro/Con	Timing	Impact on all sources	Opposes Reanalysis	Cost	FLM involvement	State responsibility	Other
Burlington Industries IV-D-269	C			Could result in repeated retrofits as technology improves. Results may be minimal improvement.				
Texaco, Inc. IV-D-329	C				Guidelines should distinguish between economic analysis for power plants & other facilities.			Procedures for BART determinations are tenuous Should not use modeling.
Salt River Project IV-D-267	C			Was not the intent of Congress.	Would be desirable to assess visibility improvements to BART.	Not in the Act.		

(continued)

TABLE 3-6. SUMMARY OF COMMENTS

BART

Commenter:	Concept: Pro/Con	Timing	Impact on all sources	Opposes Reanalysis	Cost	FLM involvement	State responsibility	Other
Salt River Project IV-D-288	C			Congress did not intend BART to be imposed more than once.	No cost/ benefit analysis in "BART Guidelines".			Guidance not given for 1) effectiveness of existing controls, 2) Remaining useful life, 3) degree of improvement.
Arizona Public Service Co. IV-D-298	C	Regs should be amended so SIP would not be held to 5 year requirement for BART.	Existing source not emitting pollutant not affecting visibility & should not be subject to BART review.			Should not be affected by delays in FLM response to exemption request.		Continuous emission reduction is not in the Act, nor compelled by the Act. Should take into consideration any existing and/ or planned control equipment.
WEST Assoc. IV-D-263	C	Premature to promulgate regs. 9 months for SIP is inadequate.			Excessive.			
Virginia Electric and Power Co. IV-D-272	C			Should not be required.	Low cost /benefit ratio.		Not EPA, but States have primary responsibility.	Does not believe "grandfathering" will occur.

(continued)

TABLE 3-6. SUMMARY OF COMMENTS

BART

Commenter:	Concept: Pro/Con	Timing	Impact on all sources	Opposes Reanalysis	Cost	FLM involvement	State responsibility	Other
American Paper Institute/National Forest Products Association IV-D-273	C		Failed to define which sources were subject.	Should be a grace period for sources which have installed BART, e.g. 10 years.				
Union Oil Co. of California IV-D-274	C							EPA should publish guidelines for other than power plants.
AMAX, Inc. IV-D-279	C			Moving target for industry.		Does not have expertise to make technical judgement.		
National Coal Assoc IV-D-280	C				Lack of economic analysis			Should be allowed to consider SCS. Should be allowed to petition Administrator directly.
South Carolina Public Service Authority IV-D-282	C			Should not apply to sources previously BART controlled.				Fail to tie BART to visibility problems.

(continued)

TABLE 3-6. SUMMARY OF COMMENTS

BART

Commenter:	Concept: Pro/Con	Timing	Impact on all sources	Opposes Reanalysis	Cost	FLM involvement	State responsibility	Other
Arizona Dept. of Health Services IV-D-285	P					Should not be involved.		
American Public Power Assoc. IV-D-286	C					Not authorized in the Act. Do not have technical expertise.		
Basin Electric Power Cooperative IV-D-292	C	9 months for SIP revision inadequate.	§51.306(i) is unfair and unconstitutional.	Moving target for industry.			State's role in selecting sources not established in regulations.	
Duke Power Co. IV-D-296	C			Unclear as to application.				
Western Regional Council IV-D-311	C			Was not intended in legislative history.	Carefully analyze before applying.		Should have primary responsibility.	New source should not be subject to BART.
Atlantic Richfield IV-D-310	C				None of guidelines address cost.			No discussion of visibility improvement with BART.

(continued)

TABLE 3-6. SUMMARY OF COMMENTS

BART

Commenter:	Concept: Pro/Con	Timing	Impact on all sources	Opposes Reanalysis	Cost	FLM involvement	State responsibility	Other
American Mining Congress IV-D-229	C					Should be no involvement.	Should have complete authority.	
Pacific Power & Light IV-D-240	C					FLM given too much authority should be required render an opinion on exemptions in fixed no. of days.		
U.S. Dept. of Commerce IV-D-242	P			Should include age & control effectiveness as a variable in reanalysis Generally opposed.	Decision should be based on comparison benefits/cost.			
American Petroleum Institute IV-D-243	P							Should be on a case by case base.

(continued)

TABLE 3-6. SUMMARY OF COMMENTS

BART

Commenter:	Concept: Pro/Con	Timing	Impact on all sources	Opposes Reanalysis	Cost	FLM involvement	State responsibility	Other
UARG (1st Submittal) IV-D-13	C		With major revisions to guidelines. How can BART assessments be made?		Analysis could not be made.			Basis for proposed rules not included in docket.
El Paso Gas IV-D-28	C			X				
WEST Assoc. IV-D-34	C	BART is premature.	Control technology may not control visibility.	Moving target for industry.				Will extend life of older plants. Capital not available for BART *and* expansion.
League of Women Voters of Texas IV-D-113	P						"Grandfather" clause should be modified to allow State to adopt BART for all sources.	
Atlantic Electric IV-D-125	C							Should not require NSPS for power plants.
Suk, Citizen IV-D-134	P	Should set a date to meet BART.						

(continued)

TABLE 3-6. SUMMARY OF COMMENTS

BART

Commenter:	Concept: Pro/Con	Timing	Impact on all sources	Opposes Reanalysis	Cost	FLM involvement	State responsibility	Other
Wilderness Workshop of Colorado IV-D-137	P			Should be automatic and periodic.				
Chemical Manufacturers Assoc. IV-D-158	C		Does not consider the source's knowledge of control.		Does not consider the source's knowledge.			
Governor, Wyoming IV-D-163	P						Final decision should be entirely State's.	
Kerr McGee Corp. IV-D-174	C	Determinations not possible in 9 mos.				Should not be involved.	Should make determination.	Not authorized by Act. Should not be as SIP revision.
City of Colorado Springs IV-D-198	C					Opposes all involvement.		
Florida Power & Light Company IV-D-255	C	9 months for SIP too short.	Guideline does not address coal-oil mixture.			Should not be involved.		

(continued)

TABLE 3-6. SUMMARY OF COMMENTS

BART

Commenter:	Concept: Pro/Con	Timing	Impact on all sources	Opposes Reanalysis	Cost	FLM involvement	State responsibility	Other
Jacksonville Electric Authority IV-D-258	C							A maximum uniform distance should be set for applying BART. Monitoring and Modeling not adequate.
General Electric IV-D-261	C			Only if no current technology at time of initial review.		Should not select sources for BART review.		Only used when can be demonstrated to improve visibility.
Missouri Dept. of Natural Resources IV-D-81	P			Should be on a regular basis. Should be a grace period between install and reanalyze.		Should not be involved.	State not EPA should determine exemption. State should reanalyze.	
Pacific Gas & Electric Co. IV-D-312	C			Limit set where BART has already been applied.				Must be clearly defined.
National Coal Assoc. IV-D-313	C				Lack of economic analysis			

(continued)

TABLE 3-6. SUMMARY OF COMMENTS

BART

Commenter:	Concept: Pro/Con	Timing	Impact on all sources	Opposes Reanalysis	Cost	FLM involvement	State responsibility	Other
U.S. Dept. of Agriculture IV-D-336	C							Identification of sources should be delayed until Dec. 31, 1985.
Potomac Electric Power Company IV-D-347	C	SIP requirements are premature. 9 mos. for SIP inadequate.					EPA has not provided guidance for identification.	Analytical techniques not validated.
Tuscon Electric IV-D-290	C	A source should not be required to install controls for SO_2 then 3 yrs. later required to install NO_x control. Not what Congress intended.		A source which once had been reviewed and installed controls should not be reviewed again.				

(continued)

TABLE 3-6. SUMMARY OF COMMENTS

BART

Commenter:	Concept: Pro/Con	Timing	Impact on all sources	Opposes Reanalysis	Cost	FLM involvement	State responsibility	Other
Pesonen, Director Calif. Dept. of Forestry IV-D-214	C					In determining "significant impairment" role of FLM vs. State is unclear. Can FLM be overruled by State?		
Foster Chevron, USA IV-F-27	C			Should not occur on a source which installs BART for at least 10 yrs after installation.				
Chapman, Atlantic Richfield Co. IV-D-287	C		Criteria for establishing and applying BART is extremely vague.	Not found in the Clean Air Act nor is it a reasonable requirement.	Reanalysis is not economically reasonable.			

(continued)

TABLE 3-6. SUMMARY OF COMMENTS

BART

Commenter:	Concept: Pro/Con	Timing	Impact on all sources	Opposes Reanalysis	Cost	FLM involvement	State responsibility	Other
Kaiser Refractories IV-D-219	C							Impose unknown economic burden.
American Textile IV-D-276				Too costly.				Need demonstration for BART.
Coleman Furniture IV-D-301				X				
Merck & Co. IV-D-307								Opposes application to reconstruction.
Southern California Gas IV-F-10				X				
Weyerhaeuser IV-D-265				X		Disagree.		
Texas Eastern IV-D-257				X		Disagree.		
Commonwealth of Virginia State Air Pollution Control Board IV-D-256						Disagree.		How BART will translate into improvement.

(continued)

TABLE 3-6. SUMMARY OF COMMENTS

BART

Commenter:	Concept: Pro/Con	Timing	Impact on all sources	Opposes Reanalysis	Cost	FLM involvement	State responsibility	Other
U.S. Dept. of Interior, Fish & Wildlife Service IV-D-295								How will combined capacities in excess of 750 MW be considered?
Tuscon Audubon Society IV-D-181	P		Support control of power plants and copper smelters.					
W. Harrison IV-F-4		Not enough time to determine BART.	Not apply to all sources.					
Magma Copper IV-F-164	C		Not apply to all sources.					No authority to apply.
Kennecott Copper IV-D-156	C					Disagrees.		
State of Nevada IV-D-238						Opposes.		
State of Utah IV-F-23				Moving target.			X	
Arizona IV-F-19					X			Consideration of non-air quality concerns.

(continued)

TABLE 3-6. SUMMARY OF COMMENTS

BART

Commenter:	Concept: Pro/Con	Timing	Impact on all sources	Opposes Reanalysis	Cost	FLM involvement	State responsibility	Other
State of Utah IV-D-291				X		Too much involvement.	X	
Evans, Kitchel & Jenckes IV-D-136							X	
Sierra Club IV-D-303	P							
DOE IV-D-325					X			Disagree with NSPS = BART.
Holland & Hart IV-D-275				X				
DOI IV-D-326	P					Recommend	Determination that BART analysis is not necessary must be required from State.	
Hunton & Williams IV-D-271				X				NSPS = BART not authorized or supported.
Hunton & Williams IV-D-300								BART guideline departs from Act. Need to reconsider BART in Phase I.

TABLE 3-7. SUMMARY OF COMMENTS

Prescribed Burning

Commenter:	Concept: Pro/Con	Not a major source	Preferable to wildfire	Forest management	Preferable to chemical and mechnical methods	Beyond intent of Congress	Fire natural	Other
Tate, Idaho State Grange IV-D-216	C							Essential to some agricultural and forestry operations.
Scott, South Carolina Forestry Association IV-D-217	C			Significant tool.	Involve high costs and risks.			Have voluntary smoke management program.
Brantly, Florida Game and Fresh Fish Commission IV-D-223	C		Wildfire should be part of natural baseline.		X			Wildlife management guidelines should be flexible.
Jahn, Wildlife Management Institute IV-D-227	C			X				Flexibility, positive and permissive apprcach in guidelines requested.
Crase, Dept. of Natural Resources & Community Development IV-D-232	C			X				

(continued)

TABLE 3-7. SUMMARY OF COMMENTS

Prescribed Burning

Commenter:	Concept: Pro/Con	Not a major source	Preferable to wildfire	Forest management	Preferable to chemical and mechnical methods	Beyond intent of Congress	Fire natural	Other
Oregon Women for Timber IV-D-234	C						X	Sound ecological tool.
Hiwassee Land Company IV-D-23	C	X	X					Historical wildfires should be part of baseline. Federal programs should consider existing State programs.
Yoha, International Paper Company IV-D-202	C		X			X		Inappropriate through visibility regulations.
Wick, Silviculturist IV-D-199	C		X	X	X		X	Ash provides nutrients.
Barnett, Western Forestry & Conservation Assoc. IV-D-197	C		X	X				Important in wildlife preservation.
Virginia Forestry Assoc. IV-D-19	C		X					Would result in higher costs. Prescribed burning should be exempt.

(continued)

TABLE 3-7. SUMMARY OF COMMENTS

Prescribed Burning

Commenter:	Concept: Pro/Con	Not a major source	Preferable to wildfire	Forest management	Preferable to chemical and mechnical methods	Beyond intent of Congress	Fire natural	Other
McEntire, Citizen IV-D-20	C		X					Should be exempt.
Cook, Citizen IV-D-21	C				X			Should be exempt.
Simpson Timber Co. IV-D-23	C				X	X	X	Should be exempt.
Stevens, Research Forester IV-D-24	C				X			Excellent wildlife management tool.
Bowden, Longview Fibre Company IV-D-17	C		X	X				Should be exempt.
Continental Furest Industries IV-D-206	C	X			X		Should be part baseline	Some ecosystems fire dependent, should be consistent with State/local smoke management.
Raybourne, Commission of Game & Inland Fisheries, Virginia IV-D-207	C			X				Wildlife management regulated by State now.

(continued)

TABLE 3-7. SUMMARY OF COMMENTS

Prescribed Burning

Commenter:	Concept: Pro/Con	Not a major source	Preferable to wildfire	Forest management	Preferable to chemical and mechnical methods	Beyond intent of Congress	Fire natural	Other
L.D. McFarland Co. IV-D-270	C				X		Should be part of baseline.	States should determine necessity. Should be postponed until after Phase I.
Salt River Project IV-D-267	P	Should be considered a point source.						
Maxwell, Citizen IV-D-25	C	X		X	X	X		Requires States without air quality problem to consider smoke management.
Cole & Krauss, Washington Dept. of Nat. Resources IV-D-26	C	X	X					Should use data - prescribed burning for baseline.
Coslett, Oregon Forest Protection Association IV-D-176	C			X		X		If cannot vent over Cascade Mtns. - no place for it to go.
Chestnutt, Society of Am. Foresters, Ala. (IV) IV-D-195	C	X	X	X				Should be exempt.

(continued)

TABLE 3-7. SUMMARY OF COMMENTS

Prescribed Burning

Commenter:	Concept: Pro/Con	Not a major source	Preferable to wildfire	Forest management	Preferable to chemical and mechnical methods	Beyond intent of Congress	Fire natural	Other
Prather, Colorado Cattlemen's Assoc. IV-D-204	C	X			X		Prescribed burning should be baseline.	Should consider existing State programs, may put some ranchers out of business.
S.D. Dept. of Game, Fish, and Parks IV-D-1	C	X	X					
Hutchins, Citizen IV-D-3	C			X				
Winger, Citizen IV-D-4	C				X	X		
Dressel, Citizen IV-D-5	C		X		X	X	X	Class I areas enjoyed by small affluent segment of the public. Should be controlled in populated areas.
Freedman, Citizen IV-D-6	C				X			Increased cost - forest products
Self, Forester IV-D-7	C				X	X	X	

(continued)

TABLE 3-7. SUMMARY OF COMMENTS

Prescribed Burning

Commenter:	Concept: Pro/Con	Not a major source	Preferable to wildfire	Forest management	Preferable to chemical and mechnical methods	Beyond intent of Congress	Fire natural	Other
Hagelston, Citizen IV-D-8	C	X						Most State and local governments have regulations. Guidelines are available.
Jeffery, Forester IV-D-10	C		X					
Taylor, Citizen IV-D-11	C		X	X				No real problem.
Reese, Citizen IV-D-12	C				X	X	X	Smoke management should only address populated areas.
Saunders, Citizen IV-D-14	C	X	X		X	X	X	
Utz, Citizen IV-D-15	C		X		X		X	Smoke management regulations exist in most States.
VA Farm Bureau Federation IV-D-29	C							Farmers need a tool for site preparation.
American Pulpwood Association IV-D-66	C	X	X	X				Strike from regulations.

(continued)

TABLE 3-7. SUMMARY OF COMMENTS

Prescribed Burning

Commenter:	Concept: Pro/Con	Not a major source	Preferable to wildfire	Forest management	Preferable to chemical and mechnical methods	Beyond intent of Congress	Fire natural	Other
NACASI IV-D-74	P		X					Forest Service should develop guidelines.
Union Camp IV-D-78	C		X	X	X			
Staten, Citizen IV-D-107	C		X				X	Already regulated by States.
N.J. Division of Parks and Forestry IV-D-108	C		X	X				Raises product. of forest prod.
AL. Forestry Assoc. IV-D-110	C		X	X				Prescribed fires have a positive net impact on visibility.
Davidson, Citizen IV-D-112	C		X	X				Already guidelines for this.
GA Forestry Assoc. Inc. IV-D-114	C		X	X	X			State maintains smoke management system.
Johnston Lumber Co. IV-D-116	C							

(continued)

TABLE 3-7. SUMMARY OF COMMENTS

Prescribed Burning

Commenter:	Concept: Pro/Con	Not a major source	Preferable to wildfire	Forest management	Preferable to chemical and mechnical methods	Beyond intent of Congress	Fire natural	Other
FL Dept. of Agriculture & Consumer Services IV-D-120	C				X		X	
Natl. Cattlemen's Assoc. IV-D-127	C		X	X				Already regulated. Impair visibility only short time.
LA Forestry Assoc. IV-D-129	C		X	X				Need comes before visual beauty.
Brand S Corp. IV-D-131	C							
CA State Grange IV-D-133	C		X	X				If implemented, wildfires should be part of "baseline". Should be coordinated with present State programs.
Oregon Women for Agriculture IV-D-138	C							Unnecessary. Increased cost. Short duration.

(continued)

TABLE 3-7. SUMMARY OF COMMENTS

Prescribed Burning

Commenter:	Concept: Pro/Con	Not a major source	Preferable to wildfire	Forest management	Preferable to chemical and mechnical methods	Beyond intent of Congress	Fire natural	Other
N.C. Dept. of Natural Resources, Forest Res. Div. IV-D-140	C		X	X				N.C. manages voluntary program. Only done under controlled cond.
Matovich, Citizen IV-D-140	C							
Burlington Northern IV-D-143	C						X	If adopted, burning should be considered BACT.
Newton, Citizen IV-D-162	C							
Nevada Cattlemen's Assoc. IV-D-169	C						X	Selective release of emissions. Should not require a SIP.
Crown-Zellerbach IV-D-171	C							
Oregon Seed Council IV-D-173	C				X	X		No economic assessment made. Impact minimal time. Could cause severe economic impact to seed growers.

(continued)

TABLE 3-7. SUMMARY OF COMMENTS

Prescribed Burning

Commenter:	Concept: Pro/Con	Not a major source	Preferable to wildfire	Forest management	Preferable to chemical and mechnical methods	Beyond intent of Congress	Fire natural	Other
CA Air Resources Board IV-D-177	C							State regulations are adequate.
Montana State Air-shed Group IV-D-193	C					X		Not significant impairment. Smoke management should be BACT.
Boise Cascade Corp. IV-D-203	C	X	X					
Oregon Dept. of Env. Quality IV-D-209	C							Should be long-term strategy.
American Paper Institute/National Forest Products Assoc. IV-D-273	C	X	X	X			X	Not subject to BART pre-8/7/62. Existing programs adequate.

(continued)

TABLE 3-7. SUMMARY OF COMMENTS

Prescribed Burning

Commenter:	Concept: Pro/Con	Not a major source	Preferable to wildfire	Forest management	Preferable to chemical and mechnical methods	Beyond intent of Congress	Fire natural	Other
Potlatch Corp. IV-D-324	C		X	X	X	X	X	Conversion to energy use may not reduce total emissions. Perform a cost/benefit analysis. Should be optional with States. Should be separated from BART & NSR.
Dept. of Agriculture IV-D-336	C	X						Reference to prescribed burning should be deleted. Smoke management programs already exist.
Union Camp Corp. IV-F-7	C		X	X				Does not reflect net air quality benefit. Imposes inflexible requirement on State.

(continued)

TABLE 3-7. SUMMARY OF COMMENTS

Prescribed Burning

Commenter:	Concept: Pro/Con	Not a major source	Preferable to wildfire	Forest management	Preferable to chemical and mechnical methods	Beyond intent of Congress	Fire natural	Other
Carey, Director Private Forestry Industrial Forestry Assoc. IV-F-20	C			Necessary.		EPA does not have statutory authority.	Back-ground levels should account for wildfire.	Will cause conflict with existing regulations in Washington and Oregon. Using slash for steam generators is not economically feasible and could cause pollution problems near urban centers. Prescribed burning has only short duration visibility effects.
Fielding, Mgr. Air Quality Programs, API/NFPA IV-F-8	C					X		Regulations should allow States to decide whether it is necessary to consider smoke management to meet visibility goals.
Gnan, Union Camp Corp. IV-F-7	C			Proposed regulations do not recognize				Net effect of prescribed fire on visibility is positive. Inflexible requirements upon State agencies.

(continued)

TABLE 3-7. SUMMARY OF COMMENTS

Prescribed Burning

Commenter:	Concept: Pro/Con	Not a major source	Preferable to wildfire	Forest management	Preferable to chemical and mechnical methods	Beyond intent of Congress	Fire natural	Other
Meredith, V.P., Forestry and Env. Affairs, Southern Forest Products Assoc. IV-D-323	C							EPA does not have the authority to regulate prescribed burning. Regulations should allow State to decide if necessary to consider smoke management. Will increase cost of lumber, plywood, paper, and housing. It is inflationary.
Pesonen, Director Calif. Dept. of Forestry IV-D-214	C			Adverse effect on tool.				
Cox, Secretary North Idaho Forestry Assn. IV-F-16	C		Reduce risk.	Increase productivity	EPA should evaluate other methods in light of environmental objectives.	Does not have authority.	Prescribed fire should be part of baseline.	States should determine whether regulations necessary. Should coordinate programs with State and Federal Agencies. Should postpone regulations until Phase II or Phase III.

(continued)

TABLE 3-7. SUMMARY OF COMMENTS

Prescribed Burning

Commenter:	Concept: Pro/Con	Not a major source	Preferable to wildfire	Forest management	Preferable to chemical and mechnical methods	Beyond intent of Congress	Fire natural	Other
California Forest Protective Assoc. IV-D-293								California has an effective State plan.
National Assoc. of State Foresters IV-F-15				X				
Tennessee Wildlife Resources Agency IV-D-184				X				State wildlife agencies given opportunity to review prescribed burning regulations. Section 51.306(f)(5) should be rewritten.
Idaho Veneer IV-D-185	C			Will be severely inhibited.				Oppose regulations application to prescribed burning.
Pederson, Citizen IV-D-180	C			X				Disapproves control of burning.
Scott Paper IV-D-172	C			X				Without burning cost of timber will increase.
Inland Forest Resources Council IV-F-31	C			X				

(continued)

TABLE 3-7. SUMMARY OF COMMENTS

Prescribed Burning

Commenter:	Concept: Pro/Con	Not a major source	Preferable to wildfire	Forest management	Preferable to chemical and mechnical methods	Beyond intent of Congress	Fire natural	Other
International Assoc of Fish & Wildlife IV-D-320	C			X				
Society of American Foresters IV-D-235	C	X		X				
Arkansas Forestry Commission IV-D-246	C				Alternate methods more costly.			
Florida Forestry Association IV-D-304	C		X		Alternate methods too costly.			Florida has effecti prescribed burning regulations. Temporary conditions.
State Forester, Oregon IV-D-85	C							
McBride, St. Regis Paper IV-D-97	C							Opposes regulations to ban prescribed burning.
State Forester, Hawaii IV-D-334	C							Opposes.

(continued)

TABLE 3-7. SUMMARY OF COMMENTS

Prescribed Burning

Commenter:	Concept: Pro/Con	Not a major source	Preferable to wildfire	Forest management	Preferable to chemical and mechnical methods	Beyond intent of Congress	Fire natural	Other
NE Area State Forester & State Forester, Ill. IV-D-340	C							Opposes.
State of Montana IV-D-306	C			X				
Montana Dept. of Natural Resources IV-D-240	C			X				
DOI IV-D-326				Should be considered in long term strategy.				
Oregon Forest Protection Assoc. IV-D-176	C			X				
Carlton N. Owen IV-D-47	C		X	X				
Harold M. Phillips IV-D-49	C			X				

(continued)

TABLE 3-7. SUMMARY OF COMMENTS

Prescribed Burning

Commenter:	Concept: Pro/Con	Not a major source	Preferable to wildfire	Forest management	Preferable to chemical and mechnical methods	Beyond intent of Congress	Fire natural	Other
Ronald O. Skoog, Alaska Dept. of Fish and Game IV-D-51	C			X				
M. K. Rudy, VA Agribusiness Council IV-D-59	C							Increased costs if prohibited.
George Anderson IV-D-60	C							Oppose regulation of prescribed burning.
Ben Park IV-D-63	C		X					
Richard C. Allen IV-D-67	C							
Royce Satterlee IV-D-72	C							
William Dockins, Montana Pole and Treating Plant IV-D-76	C		X					

TABLE 3-8. SUMMARY OF COMMENTS

Phased Approach

Commenter:	Concept: Pro/Con	Does not provide adequate time for SIP development or BART	Specific date for Phase II	Other
Salt River Project IV-D-267	C			Will not overcome limitations of modeling.
Arizona Public Service Company IV-D-278	P	Approach presented in regulations is premature. Inadequate understanding of pollutant transport and transformation mechanisms. Lack of: validated models, monitoring techniques, cost/benefit methods for alternate control strategies, understanding of human perception. Phase II - regulations for SIP & BART analyses.		Phased approach should be revised.
Denison, Oregon Women for Timber IV-D-234	C			Discriminates against single sources. Impacts large number of people. Discriminates against groups directly dependent on the single source.
Kamp, Citizen IV-D-213	P			Protects public against having visible pollution. Requests protection apply to Class II areas.
Texaco, Inc. IV-D-329	P	Basis for regulations should be developed before compliance strategies are required. SIP revision would require a plan to develop modeling or pollutant concentration monitoring.		
WEST IV-F-9	P			EPA should adopt a 5-year plan to study problems.

(continued)

TABLE 3-8. SUMMARY OF COMMENTS

Phased Approach

Commenter:	Concept: Pro/Con	Does not provide adequate time for SIP development or BART	Specific date for Phase II	Other
Michigan Botanical Club IV-D-30	P			Speed up Phase II - More work on haze problem.
WEST Assoc. IV-D-34	P			Proposes a six increment procedure. The phases will run until May, 1995.
League of Women Voters of U.S. IV-D-58	P		A schedule for later phases should be set in final rule.	
Rees, Citizen IV-D-109	P		X	
League of Women Voters of Texas IV-D-113	P		X	
Dahm, Citizen IV-D-154	P		X	
Colorado - Ute Electric Assoc. IV-D-159	C	EPA should request a 5-year extension from Congress.		
Pettit, Citizen IV-D-167	P		X	
Montana State Airshed Group IV-D-193	P			

(continued)

TABLE 3-8. SUMMARY OF COMMENTS

Phased Approach

Commenter:	Concept: Pro/Con	Does not provide adequate time for SIP development or BART	Specific date for Phase II	Other
American Petroleum Institute IV-D-243	P			
General Electric IV-D-261	C	Should reschedule rulemaking for Nov. 15, 1985. More studies needed.		
WEST Assoc. IV-D-263	C	A multi-year approach for development and promulgation would be better.		
Arizona Dept. of Health Services Div. of Env. Health Services. IV-D-285	P	Phased approach should be adopted for required SIP revisions.		
Western Regional Council IV-D-311	P	Initiation of plume blight control as 1st phase may be premature.		
Potlatch Corp. IV-D-334	P			
U.S.D.A. IV-D-336	P			Lack of technical information.
San Diego Gas & Electric IV-D-339	C	Long time table such as proposed by WEST should be followed. Give States more time. Develop background more.		

(continued)

TABLE 3-8. SUMMARY OF COMMENTS

Phased Approach

Commenter:	Concept: Pro/Con	Does not provide adequate time for SIP development or BART	Specific date for Phase II	Other
Breault, Citizen IV-D-251	P		X	
Foster, Chevron, USA IV-F-27	P	New sources and modifications should not be vulnerable to permit denial based on visibility impacts until EPA has validated and approved visibility impact models.		
Fikar, Texas Utilities Services, IV-D-330	P			Only direct visual observation should be used in identifying sources for Phase I.
National Parks and Conservation IV-D-277	C		X	
National Assoc. of State Foresters IV-F-15	P			
Heath, Citizen IV-D-36	P		X	
Teas, Citizen IV-D-44	P		X	
Liberty National Life Insurance IV-D-50	P		X	
New, Citizen IV-D-56	P		X	

(continued)

TABLE 3-8. SUMMARY OF COMMENTS

Phased Approach

Commenter:	Concept: Pro/Con	Does not provide adequate time for SIP development or BART	Specific date for Phase II	Other
Yarbrough, Citizen IV-D-57	P		X	
Warner, Citizen IV-D-61	P		X	
Gailey, Citizen IV-D-64	P		X	
Pollard, Conservation Call IV-D-70	P		X	
Guenther, Citizen IV-F-21	P		X	
West Associates IV-D-283				5-year program.
Rio Blanco Oil Shale IV-D-266	P			
Standard Oil IV-D-241		X		More research to support regulations.
Santa Fe Research IV-D-249				Structure of regulations may not be adequate to handle regional haze.
Cities Service IV-D-335				Need to address reasonable progress.
Weyerhaeuser IV-D-265		X		

(continued)

TABLE 3-8. SUMMARY OF COMMENTS

Phased Approach

Commenter:	Concept: Pro/Con	Does not provide adequate time for SIP development or BART	Specific date for Phase II	Other
Society of American Foresters IV-D-235	P			
Ciak, Citizen IV-D-71	P		X	
Rivers, Citizen IV-D-75	P		X	
Barry & Corbin, Citizen IV-D-82	P			Date for specific papers must be met.
Brennan, Citizen IV-D-84	P		X	
Culp, Citizen IV-D-99	P		X	
Bensinger, Video Info. IV-D-342	P		X	
W. Harrison, Southern Company IV-F-4	P			
State of Montana IV-D-306	P			
State of Utah IV-F-23	P			Needs further refinement.

(continued)

TABLE 3-8. SUMMARY OF COMMENTS

Phased Approach

Commenter:	Concept: Pro/Con	Does not provide adequate time for SIP development or BART	Specific date for Phase II	Other
State of Utah IV-D-291	P			
Friends of Earth IV-F-3			X	

TABLE 3-9. SUMMARY OF COMMENTS

Technical Guidance

Commenter:	Concept: Pro/Con	Modeling	Monitoring	Lack of technical tools	Other
Occidental Oil Shale, Inc. IV-D-192	C		Method to determine a change in range, contrast, coloration area not established.		
Texaco, Inc. IV-D-329	C	May be useful tool if properly "tuned".	Need data base.		
Salt River Project IV-D-267	C	Guideline inadequate - doesn't work for long range transport. Gaussian plume - inappropriate.			
Salt River Project IV-D-288	C	Model in complex terrain - inaccurate.	Questions guidelines - techniques not good enough.		
Arizona Public Service Co. IV-D-278	C	Validated models needed. Too many incorrect assumptions in models.	Delegated to FLM - should not have. Guidance inadequate.		
Pacific Gas and Electric IV-F-18	C	Visibility models have not been validated.			
WEST Assoc. IV-F-9	C	Validated models are needed.		Data and methods are needed.	

(continued)

TABLE 3-9. SUMMARY OF COMMENTS

Technical Guidance

Commenter:	Concept: Pro/Con	Modeling	Monitoring	Lack of technical tools	Other
Roberts, Citizen IV-C-8	P		Lack of-major flaw		
Governor Atiyeh, Oregon IV-C-11	P	Models not well developed.			
Levy, Citizen IV-C-13	P		Not mentioned specifically for new sources or BART in regs.		
Verville, S.D. Dept of Game, Fish, & Parks IV-D-1	P		Feds should underwrite costs of monitoring.		
Tuscon Electric Power Company IV-D-290	C	SAI model is in error. Cannot be accurate modeling of visibility with SAI, PLUVUE, or box.			
Kerr McGee IV-D-174	C			Opposes §51.302(c)(4)(vi) requiring continuous emission monitoring. Little value.	
UARG (1st Submittal) IV-D-13	C	No modeling to show relationship between controls/visibility.	No guidelines available.		

(continued)

TABLE 3-9. SUMMARY OF COMMENTS

Technical Guidance

Commenter:	Concept: Pro/Con	Modeling	Monitoring	Lack of technical tools	Other
El Paso Gas IV-D-28	C	Only rough estimate until refined (should state in guidance document)	Should not be required until EPA publishes reference method.		
Michigan Botanical Club IV-D-30	P	Guidelines needed.	Guidelines needed.		
WEST Assoc. IV-D-34	P		Needs to be developed.	Research such as VISTTA study must be continued and expanded.	
League of Women Voters of U.S. IV-D-58	P		Provisions are inadequate. Guidelines are necessary.		
NACASI IV-D-74	P	Should be validated before used to assess changes.			
Friendly, Citizen IV-D-103	P		Should be required for existing sources.		
League of Women Voters of Texas IV-D-113	P		Development of improved technology.	Standards for data collection should be set.	
Leind, Citizen IV-D-118	P		Provisions should be included.		

(continued)

TABLE 3-9. SUMMARY OF COMMENTS

Technical Guidance

Commenter:	Concept: Pro/Con	Modeling	Monitoring	Lack of technical tools	Other
Suk, Citizen IV-D-134	P	Need for new sources.			
Burlington - Northern IV-D-143	C	Not sophisticated methods for visibility at this time.			
Air Resources Board State of CA IV-D-177	P		EPA should pay for equipment.		
Montana State Airshed Group IV-D-193	C	No computer modeling for prescribed burning.			
Dept. of Env. Quality, State of Oregon IV-D-209	C			Not well developed.	
American Mining Congress IV-D-229	C	EPA should recognize limitations.		Will not be able to predict impact from BART or new sources.	
WEST Assoc. IV-D-263	C	Guideline--Fails to account for transport and diffusion, chemistry, optics, & coloration. First levels of screening are too simplistic. Model contains incorrect assumptions.	Guideline - visibility related to haze but regs. speak to plumes. Guideline fails to provide for adequate measurement and quantification.		

(continued)

TABLE 3-9. SUMMARY OF COMMENTS

Technical Guidance

Commenter:	Concept: Pro/Con	Modeling	Monitoring	Lack of technical tools	Other
Virginia Electric and Power IV-D-372	C	EPA should refrain from using for regulatory purposes until fully validated.			
API/NFPA IV-D-273	C	Validated - not available. Should not be encouraged until models are validated.	Panels of 25-30 people should be formed.		
AMAX, Inc. IV-D-279	C	Modeling not available at this time.			
Tampa Electric Co. IV-D-289	C	Present models will not work at at >10 km. Variety of other limitations.			
Atlantic Richfield Company IV-D-310	C	Cannot predict visibility in very complex terrain.	Guideline is more than necessary. Components on instruments. Does not have complete plan. Statistical analysis; not complete.		
Pacific Gas and Electric IV-D-314	C	Model never validated "Workbook"- Only accurate up to 50 km.			

(continued)

TABLE 3-9. SUMMARY OF COMMENTS

Technical Guidance

Commenter:	Concept: Pro/Con	Modeling	Monitoring	Lack of technical tools	Other
Dept. of Conservation and Natural Resources, Div. of Env. Prot., State of Nevada. IV-D-316	P	Can a reliable model be developed? Can local terrain problems be solved? Can chemical changes be accommodated?			
Platte River Power Authority IV-D-328	C	"Workbook" latest revision of Turner's should be referenced. Latest Brigg's plume rise equation should be used.			
U.S.D.A. IV-D-336	C		EPA should publish a guideline. May not be possible with instruments because of inaccessibility and no electricity. Strategy should not be based on on-going research.		
Davis & Davis, Citizens IV-D-350	P	Guidelines should be issued.	Guidelines should be issued.		
Heckel, Citizen IV-D-353	P	Guidelines should be issued.	Guidelines should be issued.		

(continued)

TABLE 3-9. SUMMARY OF COMMENTS

Technical Guidance

Commenter:	Concept: Pro/Con	Modeling	Monitoring	Lack of technical tools	Other
Pesonen, Director California Dept. of Forestry IV-D-214	P		EPA should promulgate a national guideline under §319 of the Act.		
Bliss, Utah Environment Center IV-D-25	P		Create an effective monitoring program.		
Troland, Citizen IV-D-346	P		Urges use of most modern technology available for proposed monitoring program.		
Reid, Citizen IV-D-248	P		Urges use of current monitoring and tracing techniques to cover single sources; also the broader creation of haze.		
Skinner, Citizen IV-D-190			Photographic technique should be used.		
Walker, Citizen IV-D-186	P		X		
ERT IV-D-317		Replace SAI model with ERT's - more applicable.			

(continued)

TABLE 3-9. SUMMARY OF COMMENTS

Technical Guidance

Commenter:	Concept: Pro/Con	Modeling	Monitoring	Lack of technical tools	Other
Crump, Citizen IV-D-37	P	All major sources should be required to model.			
Morgan, Citizen IV-D-39	P		More needed.		
Stansfield, Citizen IV-D-41			More guidance.		
New, Citizen IV-D-56	P	X	X		
Yarbrough, Citizen IV-D-57	P	X	X		
Warner, Citizen IV-D-61	P	X	X		
Frye, Citizen IV-D-62	P	X	X		
Guenter, Citizen IV-F-21	P		Need sophisticated technique as soon as possible.		
Pardee, Citizen IV-D-189			Strengthen requirements.		
International Paper IV-D-225	C	Unvalidated.			
Rockwell International IV-D-284		Some errors in model.	Other techniques besides telephotometry.		

(continued)

TABLE 3-9. SUMMARY OF COMMENTS

Technical Guidance

Commenter:	Concept: Pro/Con	Modeling	Monitoring	Lack of technical tools	Other
U.S. Dept. of Interior, Fish and Wildlife Service IV-D-295		Need guidance for PSD.			
National Parks and Conservation Assoc. IV-D-277		More guidance must be required.	More guidance must be required.		
National Assoc. of State Forester IV-F-15			Disagrees with expensive monitoring requirements.		
Montana Dept. of Natural Resources IV-D-240	C	Computer modeling not used to manage prescribed burning.			
Oregon's Dept. of Environmental Quality IV-D-332	C	None of techniques applicable to Oregon. Guidance does not address long range plans.	Too expensive.		More definitive BART guidance.
State of Utah IV-F-23				X	
Pacific Power & Light IV-F-29	C		More guidance needed.	X	
State of Utah IV-D-291				X	

(continued)

TABLE 3-9. SUMMARY OF COMMENTS

Technical Guidance

Commenter:	Concept: Pro/Con	Modeling	Monitoring	Lack of technical tools	Other
DOE IV-D-325		Serious shortcomings. Errors in PLUVUE model.	Generally good. Need more meteorological monitoring. Need human perception monitoring.		
Gailey, Citizen IV-D-64	P	X	X		
Pollard, Conservation Call IV-D-70	P	X	X		
Ciak, Citizen IV-D-71	P	X	X		
Rivers, Citizen IV-D-75	P		X		
Brennan, Citizen IV-D-84	P	X	X		
Thorniley, Citizen IV-D-86	P		X		
Sebastian, Citizen IV-D-337	P		X		
Sturtevant, Citizen IV-D-338			X		

(continued)

TABLE 3-9. SUMMARY OF COMMENTS

Technical Guidance

Commenter:	Concept: Pro/Con	Modeling	Monitoring	Lack of technical tools	Other
Bensinger, Video Info. IV-D-342	P	X	X		
W. Harrison, Citizen IV-F-4	C		No reference method.	Failure to publish adequate information.	
State of Nevada IV-D-238	P				More guidance on BART.
National Coal Assoc IV-D-299				X	
Friends of the Earth IV-F-3			Insufficient.		
DOI IV-D-326	P	Finalize ASAP	Finalize guideline ASAP. Need more monitoring.		
Hunton & Williams IV-D-271	C	Incomplete.	Incomplete		
Hunton & Williams IV-D-300		Several major modeling issues remain. No discussion of how to consider human perception. Users manual too complicated.	Fundamental flaws. Many assumptions are not justified.	X	

TABLE 3-10. SUMMARY OF COMMENTS

New Source Review

Commenter:	Concept: Pro/Con	Lack of coordination	Inconsistancies definitions	Tools to implement provisions dealing with impact on visibility	Inhibits growth	Fugitive emissions	Other
WEST IV-F-9	C						New source regulations will increase cost to the consumer. Visibility regulations will be counter productive. EPA should adopt a 5 year plan to study the problem.
Puget Sound Power & Light Co. IV-C-5	C						Visibility protection should remain flexible until baseline values can be established.
Allegheny Mining Company IV-C-6	C						Opposes inclusion in regulations.
Roberts, Citizen IV-C-8	P	EPA should review all new source permits. Role of FLM should be strengthened.					

(continued)

TABLE 3-10. SUMMARY OF COMMENTS

New Source Review

Commenter:	Concept: Pro/Con	Lack of coordination	Inconsistancies definitions	Tools to implement provisions dealing with impact on visibility	Inhibits growth	Fugitive emissions	Other
Va. Manufacturer's Assoc. IV-C-10	C				Role of FLM could delay or prevent industrial development.		
Levy, Citizen IV-C-13	P	Clear methods for FLM to object to permitting new source are needed.		Procedure for FLM to analyze impact is needed. Monitoring is not in regulations.			Regulations must require review of visibility impact. Stated method by which EPA will review and weigh the FLM's comment is needed.
U.S. Dept. of Commerce IV-D-242	P					Proposed regs. do not account for fugitive source that is almost uncontrollable--e.g. large lime quarry or open pit mine; further clarification.	

(continued)

TABLE 3-10. SUMMARY OF COMMENTS

New Source Review

Commenter:	Concept: Pro/Con	Lack of coordination	Inconsistancies definitions	Tools to implement provisions dealing with impact on visibility	Inhibits growth	Fugitive emissions	Other
Union Oil Co. of CA IV-D-274	C					VOC fugitives from valves and flanges are easier to control than other types of fugitive emissions and should not be so called. Emissions from coal piles, rock piles, roads etc. should not prevent necessary mining and energy projects.	
WEST Assoc. IV-D-34	C				Inhibit development in western U.S.		

(continued)

TABLE 3-10. SUMMARY OF COMMENTS

New Source Review

Commenter:	Concept: Pro/Con	Lack of coordination	Inconsistancies definitions	Tools to implement provisions dealing with impact on visibility	Inhibits growth	Fugitive emissions	Other
NCASI IV-D-74	C			Should not require use of unvalidated models.			
Missouri Dept. of Nat. Resources IV-D-81	C	Opposed to notifying FLM. Appears to give FLM veto power.	"Adverse impact" in 51.307(b) not clear. 51.307(g) - who will resolve disputes?				
Rees, Citizen IV-D-109	P			FLM should have 1 yr. to review permit application.			
Roberts, Citizen IV-D-130	P	Opposes NSR delegation to States. EPA should be final reviewer.					
Suk, Citizen IV-D-134	P			Needs modeling			Final regs. should state burden of proof is placed on developer.
Wilderness Workshop of Colorado IV-D-137	P	FLM must agree before permit is granted.					Approval of a new source must be contingent or no perceptible change in visibility.

(continued)

TABLE 3-10. SUMMARY OF COMMENTS

New Source Review

Commenter:	Concept: Pro/Con	Lack of coordination	Inconsistancies definitions	Tools to implement provisions dealing with impact on visibility	Inhibits growth	Fugitive emissions	Other
Marion, Citizen IV-D-147	P			FLM should have 1 yr. to review permit.			
Governor, Wyoming IV-D-163	C	State should be final authority in issuance of permit.					
Pettit, Citizen IV-D-167	P			FLM should have 1 yr. to review permit.			
Kerr-McGee Corp. IV-D-174	C						Application of visibility regulations in nonattainment areas contrary to Alabama Power decision.
Montana Power Co. IV-D-175	C			Opposes a case-by-case analysis without specific criteria in advance.			FLM should not participate in the decisionmaking. This type of Federal reg. is confiscatory.
Air Resources Board of Calif. IV-D-177	P	Final decision should be with the State.					

(continued)

TABLE 3-10. SUMMARY OF COMMENTS

New Source Review

Commenter:	Concept: Pro/Con	Lack of coordination	Inconsistancies definitions	Tools to implement provisions dealing with impact on visibility	Inhibits growth	Fugitive emissions	Other
No Oilport, Inc. IV-D-196	P						
American Mining Congress IV-D-229	C			Modeling limited.			Should not be covered under 169A of the Act.
Pacific Power & Light Company IV-D-240	C						FLM is unnecessarily involved.
American Petroleum Institute IV-D-243	C			Technical problems (monitoring and modeling) are not sufficiently resolved to warrant new source review.			Present PSD regs. protect visibility.
General Electric IV-D-261	C						Sources subject to new source review should not be subject to BART later.

(continued)

TABLE 3-10. SUMMARY OF COMMENTS

New Source Review

Commenter:	Concept: Pro/Con	Lack of coordination	Inconsistancies definitions	Tools to implement provisions dealing with impact on visibility	Inhibits growth	Fugitive emissions	Other
API/NFPA IV-D-273	C			Lack of guidance about relationship of PSD/BACT and visibility maintenance to be determined.		Should be in a separate rulemaking.	Too much power to the FLM.
AMAX, Inc. IV-D-279	C	EPA dictating control strategy to State.				Should not be counted or counted only to the extent they can significantly impact visibility e.g. particles less than 1 micron. EPA has not shown fugitives interfere with visibility.	States should be free to develop own control strategy, e.g. mobile source over stationary source control.
South Carolina Public Service Authority IV-D-282	C		"Adverse impact" too broad a definition. Should be "adverse effect on enjoyment"				

(continued)

TABLE 3-10. SUMMARY OF COMMENTS

New Source Review

Commenter:	Concept: Pro/Con	Lack of coordination	Inconsistancies definitions	Tools to implement provisions dealing with impact on visibility	Inhibits growth	Fugitive emissions	Other
American Public Power Assoc. IV-D-286	C						FLM's have unauthorized responsibilities. Final decisions should not be made by FLM's. Source should be involved in negotiations.
Tampa Electric Co. IV-D-289	C						Not authorized in the Act. Already contained in the PSD regulations. Preconstruction review by FLM are unwarranted and unjustified.
Western Regional Council IV-D-311	C			Unclear where monitoring must take place.			Nonsubsequent BART requirement should be imposed on a permitted new source. If predictive techniques were inaccurate, retrofit should not be required.

(continued)

TABLE 3-10. SUMMARY OF COMMENTS

New Source Review

Commenter:	Concept: Pro/Con	Lack of coordination	Inconsistancies definitions	Tools to implement provisions dealing with impact on visibility	Inhibits growth	Fugitive emissions	Other
Potlatch Corp. IV-D-324	C			Lack of valid monitoring techniques make these regulations premature. No clear guidelines on how a new source will be identified or controlled.			FLM is given a major role in permitting process and should not be. Regulations should be postponed.
U.S.D.A. IV-D-336	P	30 days is not adequate to respond to a proposed permit. PSD visibility requirements should be fully coordinated between PSD and rules under 169A.	Define a minimum process for dispute resolution.	Visibility modeling needs to be addressed in visibility role or PSD rule.			Is not consistent with §165 of the Act; should be rewritten under PSD regulations. EPA should promulgate a rule under 165(e) requiring advance consultation with the FLM and source.

(continued)

TABLE 3-10. SUMMARY OF COMMENTS

New Source Review

Commenter:	Concept: Pro/Con	Lack of coordination	Inconsistancies definitions	Tools to implement provisions dealing with impact on visibility	Inhibits growth	Fugitive emissions	Other
Arizona Public Service Co. IV-D-298	C	Not all States have public hearings on preconstruction permits. Procedures should be consistent with present State requirements.	"Adverse impact" should provide guidance - include recognition. New & modified sources will not adversely affect visibility.				
Levy, Citizen IV-D-233	P						PSD review procedure should be applied to new sources to assess impact on visibility.
Regulatory Analysis Review Group, Council on Wage & Price Stability IV-D-22	C	Does not specify a compliance time frame.	Questions distinction between new and existing sources.		Prevents comparison of the cost and benefits by States. Does not specify the cost of denying a permit.		

(continued)

TABLE 3-10. SUMMARY OF COMMENTS

New Source Review

Commenter:	Concept: Pro/Con	Lack of coordination	Inconsistancies definitions	Tools to implement provisions dealing with impact on visibility	Inhibits growth	Fugitive emissions	Other
Western Oil & Gas Assoc. IV-D-188	C			New sources should be subject to BACT. Should be limited.			
Texaco, Inc. IV-D-329	C						Present NSPS and PSD regulations provide adequate protection for Phase I. No appreciable benefits to compensate for energy availability.
Chapman, Environmental Mgr., Atlantic-Richfield IV-D-287	C			Current programs will not be able to accurately define visibility impairments until late 1980's or beyond.			

(continued)

TABLE 3-10. SUMMARY OF COMMENTS

New Source Review

Commenter:	Concept: Pro/Con	Lack of coordination	Inconsistancies definitions	Tools to implement provisions dealing with impact on visibility	Inhibits growth	Fugitive emissions	Other
Pesonen, Director Calif. Dept. of Forestry IV-D-214	P						Bridge not provided between NSR and PSD. Priority should be to 1) prevent problems where visibility is good, 2) make reasonable progress to improve where "significantly impaired".
Trisko, Stern Bros., Inc. IV-F-11	C				Attainment of balance between national energy & environmental objectives will require substantial legislative modification of PSD and visibility.		The addition of visibility as an "air quality related value" defeats the purpose of comparison in §169(d) of the Act. Allows an 18 day SO_2 variance for certain sources whose emissions would cause or contribute to violations in Class I areas.

(continued)

TABLE 3-10. SUMMARY OF COMMENTS

New Source Review

Commenter:	Concept: Pro/Con	Lack of coordination	Inconsistancies definitions	Tools to implement provisions dealing with impact on visibility	Inhibits growth	Fugitive emissions	Other
WEST Associates IV-D-283							Primary mechanism should be PSD. NSPS will protect visibility.
Tenn. Gas Transmission IV-D-331	C						No special NSR requirement under visibility.
Trisko IV-D-105	C				X		With PSD no need for visibility.
Sierra Club IV-D-303	C	Need to work out coordination among State/EPA & FLM.					
Friends of Earth IV-F-3		X				X	
Holland & Hart IV-D-275		X					

(continued)

TABLE 3-10. SUMMARY OF COMMENTS

New Source Review

Commenter:	Concept: Pro/Con	Lack of coordination	Inconsistancies definitions	Tools to implement provisions dealing with impact on visibility	Inhibits growth	Fugitive emissions	Other
DOI IV-D-326	P	Need more coordination. Earliest possible time.					30 day review time inadequate. More guidance on what constitutes adequate FLM demonstration.
Hunton & Williams IV-D-300							Need guideline on implementing NSR.

TABLE 3-11. SUMMARY OF COMMENTS

Costs vs. Benefit

Commenter:	Concept: Pro/Con	Assessing improvement	Reasonable attribution	ICF analysis	Other
Colorado-Ute Elec. Assoc., Inc. IV-F-32	C			Incorrect tabulations of emissions at Bullock Sta. Underestimated costs of retrofit.	
Arizona Public Service Co. IV-F-13	C		EPA ignored cost-benefit analysis on BART.		
Scott Paper Co. IV-C-4	C		Aggregate costs out of proportion to benefits gained.		
Allegheny Mining Corp. IV-C-6	C	Most wilderness areas are not important recreational attractions.	Could have severe economic impact.		
Davidson, Forester IV-C-9	C	Prescribed burning - concern not given to economic impact.			
Tuscon Electric Power IV-D-290	C				Does not address contribution urban and mobile sources in costs/benefits.
Oregon Seed Council IV-D-174	C	Would cause severe economic impact to reduce prescribed burning.			

(continued)

TABLE 3-11. SUMMARY OF COMMENTS

Costs vs. Benefit

Commenter:	Concept: Pro/Con	Assessing improvement	Reasonable attribution	ICF analysis	Other
WEST Assoc. IV-D-34	C	Presumed benefits are unquantified and uncertain compared to energy and economic costs possible.	Could affect reliability of electric power supply. Could lock up land mass larger than State of Mississippi.		
United Power Assoc. IV-D-65	C		What criteria will be used to determine when economic impact becomes a factor.		
New Mexico Citizens for Clean Air & Water IV-D-90	P			Analysis twice as high - cost as data would indicate.	
Allegheny Mining Corp. IV-D-111	C	Costs out of line with value to the public.	Benefits do not justify cost.	Did not include local economic impact.	
McGill, Citizen IV-D-117	C	Economic considerations should not be weighed unless in favor of preserving the parklands.			
Atlantic Electric IV-D-125	C			AE's England Station cost analysis was low by a factor of 3.	
Colorado-Ute Elec. Assoc. IV-D-159	C			Cost estimates were low.	

(continued)

TABLE 3-11. SUMMARY OF COMMENTS

Costs vs. Benefit

Commenter:	Concept: Pro/Con	Assessing improvement	Reasonable attribution	ICF analysis	Other
Superintendent, Grant Co. Schools, W. Va. IV-D-166	C		Would have detrimental economic effect to bring in low sulfur coal.		
ERT, Inc. IV-D-220	C			All references to specific sources in cost analysis should be deleted. The cost analysis based on ERT report was not accurate.	
Pacific Power and Light Company IV-D-240	C			Cost for NO_x reduction would be 11 times that outlined in report. SO_2 control would be 60% higher.	
U.S. Department of Commerce IV-D-242		BART should be based on comparison of benefits to costs.			
American Petroleum Institute IV-D-243	C			Integral vistas were not analyzed. No new source costs were projected.	

(continued)

TABLE 3-11. SUMMARY OF COMMENTS

Costs vs. Benefit

Commenter:	Concept: Pro/Con	Assessing improvement	Reasonable attribution	ICF analysis	Other
Jacksonville Elec. Authority IV-D-258	C			Cost for Northside plant SO_2 control listed as minimal. Would cost $6-7 million/yr.	
Shell Oil Co. IV-D-260	P				EPA should conduct cost analysis for integral vistas.
WEST Assoc. IV-D-263	C	No demonstration that expenditures will measurably improve visibility.	Any cost for BART now is unreasonable.	For Mohave Plant large discrepancy between Pullman-Kellogg Study and ICF Report.	
Virginia Electric and Power Co. IV-D-272	C	"Costs per acre" could exceed the Federal "Natural Resource and Environment Budget."		No comparison of costs to benefits is made. Were not based on BART.	Integral vistas could have a vast economic impact.
API/NFPA IV-D-273	C			Provides no assessment for effectiveness or benefits of the regulations.	Integral vistas have not been assessed.
National Coal Assoc. IV-D-280	C		Lack of objective economic analysis for BART.		
Arizona Dept. of Health Ser., Div. of Env. Health IV-D-285	P			Does not tell what cost of compliance will be for alternate BART.	

(continued)

TABLE 3-11. SUMMARY OF COMMENTS

Costs vs. Benefit

Commenter:	Concept: Pro/Con	Assessing improvement	Reasonable attribution	ICF analysis	Other
American Public Power Assoc. IV-D-286	C			Economic analysis neither accurate nor complete.	
Tampa Elec. Co. IV-D-289	C			Cost figures are underestimated by 30%.	
Potlatch Corp. IV-D-324	P		Should perform a cost/benefit analysis for prescribed burning.		
Heckel, Citizen IV-D-353	P	Economics and energy should not be considered.			
Chadock, South Branch Vocational Center IV-D-282	C		Costs of control and regulation greatly exceed benefit.		
Carr, County Commission, Grant County, W.Va. IV-D-224	C		Regulations should be modified to reflect realities of cost to society as a whole. Cited costs to local residents for local power plant.		
Levy, Citizen IV-D-233	P	Important to N.C. since State depends heavily on tourism for economy.			

(continued)

TABLE 3-11. SUMMARY OF COMMENTS

Costs vs. Benefit

Commenter:	Concept: Pro/Con	Assessing improvement	Reasonable attribution	ICF analysis	Other
Oregon Women for Timber IV-D-234	C	Costs to population outweigh benefits.			
Western Oil & Gas Assoc. IV-D-188	C	Results in economic harm to U.S.	Results in economic harm to U.S.		
Texaco, Inc. IV-D-329	C			Only takes into account effect on existing sources.	
Salt River Project IV-D-267	C			Failed to use valid screening techniques. Cost estimates are low. Failed to mention utility rates. Relies on NEDS data.	
Mulloy, Chairman Western Systems Coordinating Council IV-F-28, IV-F-28a	C	Visibility impairment control provides no realistic basis for a cost benefit determination.			
Jerman, Utah Power & Light Company IV-F-14	C				Economic impact analysi of the regulations is totally inadequate.
Trisko, Stern Bros Inc. IV-F-11	C				The regulation does not address cost/benefit analysis.

(continued)

TABLE 3-11. SUMMARY OF COMMENTS

Costs vs. Benefit

Commenter:	Concept: Pro/Con	Assessing improvement	Reasonable attribution	ICF analysis	Other
Chapman, Mgr. Environmental and Energy Conservation. Atlantic-Richfield Co. IV-D-287	C				Proposed rule and support documents do not adequately evaluate the impact on energy supply and costs.
McGee, Citizen IV-D-343					Natural resources greater significance than energy.
Virginia Mfg. IV-D-239					More through economic impact vs. air quality benefit.
W. Harrison IV-F-4		Costs are critical as compared to benefits.			
Governor Matheson State of Utah IV-F-23					Cost to State to implement could be significant
State of Utah IV-D-291					Cost significant.
Dept. of Interior IV-D-278a					Cost cannot be considere in vista identification.
DOE IV-D-325					No economic assessment for Phase II.

(continued)

TABLE 3-11. SUMMARY OF COMMENTS

Costs vs. Benefit

Commenter:	Concept: Pro/Con	Assessing improvement	Reasonable attribution	ICF analysis	Other
Council on Wage and Price Stability IV-D-278		Benefits subjective.			Consider broader range of factors necessary to balance the benefits and costs of control.
National Coal Assoc IV-D-299					More need for economic assessment.
Hunton & Williams IV-D-271		Difficult to assess benefits. Only protect visibility if benefits outweigh costs.		Grossly incomplete.	
Hunton & Williams IV-D-300		Need guidance for comparing all costs with benefits in terms of improvement.		Only addresses one aspect of proposed regulations. BART on existing sources. Fails to address BART associated with integral vistas.	

SUMMARY OF COMMENTS

TABLE 3-12. Identification under Section 169A(a)(2)

Commenter:	Concept: Pro/Con	Rubber stamp of Secretary of Interior's action	Implies 169A(a)(2) action can still be challenged	Other
Hunton & William IV-D-333	C	X		
American Paper Institute National Forest Products Assoc. IV-D-273	C	X	X	
National Council of the Paper Industry for Air and Stream Improvement IV-D-74			X	Inconsistent selection.

TABLE 3-13. SUMMARY OF COMMENTS

Miscellaneous

Commenter:	Concept: Pro/Con	NSO's and visibility	Reversibility of visibility impairment	Impaction future Class I areas	Other
Ramos, Citizen IV-D-228	P				Mining companies should not be given time extentions to correct violations.
Werner, Citizen IV-D-231	P	Old and new smelters should be stringently controlled.			
Gilinski, Southwest Hawk Watch IV-D-201	P				Concerned about SO_2 emissions from smelters.
Kamp, Citizen IV-D-213	P	NSO is not an exception from visibility regulations.			
Salt River Project IV-D-267	C		Congress did not have the right to enact aesthetic legislation.		Confused over terms "secondary emissions" and "secondary pollutants".
Friendly, Citizen IV-D-103	P	Visibility standards should be included in NSO's and SCS's.			
Allegheny Mining Corp. IV-D-111	C		Visibility impairment is reversible.		

(continued)

TABLE 3-13. SUMMARY OF COMMENTS

Miscellaneous

Commenter:	Concept: Pro/Con	NSO's and visibility	Reversibility of visibility impairment	Impaction future Class I areas	Other
Wilderness Workshop of Colorado IV-D-137	P			Land plan reviews should be used for review of impact. The 1 yr. requirement for identification should be dropped.	
Governor, Wyoming IV-D-163	P			States should have option to impose same or different requirements on future Class I areas.	
Fletcher, Citizen IV-D-168		Older smelters (Grandfathered) should be included.			
Florida Power & Light Company IV-D-255	C		Impairment is reversible. Aesthetic rather than a threat to public health.		
General Electric IV-D-261	C			Subsequent Class I areas should not be afforded visibility protection from an existing source unless a major modification.	

(continued)

TABLE 3-13. SUMMARY OF COMMENTS

Miscellaneous

Commenter:	Concept: Pro/Con	NSO's and visibility	Reversibility of visibility impairment	Impaction future Class I areas	Other
Pacific Gas & Electric Company IV-D-312	C		Visibility impairment is reversible. Postponement of regulations will cause no harm.		
National Coal Assoc. IV-D-313	C		Visibility impairment is reversible and an aesthetic value.		
Zarich IV-D-245					Supports total program.
Interstate Paper IV-D-297					Opposes regulations. Little or no evidence to support measures.
Coleman Furniture IV-D-301					Consider mobile as well as stationary sources.
National Association of Mfg. IV-D-254					Regulations go beyond intent of Congress.
Public Utility District #1 of Douglas County IV-D-247					Regulations lack scientific basis.
Texas Eastern IV-D-257					Regulations lack technical support.

(continued)

TABLE 3-13. SUMMARY OF COMMENTS

Miscellaneous

Commenter:	Concept: Pro/Con	NSO's and visibility	Reversibility of visibility impairment	Impaction future Class I areas	Other
Dept. of Public Utilities - Wallingford, Conn. IV-D-77					Opposes entire program.
Snyder, Visibility Task Force, Western Regional Council IV-D-327					Request a 60-day delay of hearing to allow time to prepare comments.
Templeton, Kennecott Corp. IV-F-30	C	Congress did not intend for copper smelter to be subjected to additional emission limits.			
Foster, Chevron, USA IV-F-27	P				"Visibility Offsets" from exempt sources. Suggest an extention of the "Bubble Concept" to include visibility related emissions.

SECTION 4

RESPONSE TO MAJOR COMMENTS

The following represents the responses to the major comments and issues identified in Section 2 and summarized in Section 3. A summary of each individual comment by commenter is in Appendix A.

4.1 DEFINITION OF VISIBILITY IMPAIRMENT

There were many commenters which had some reservations about the definition of "visibility impairment." Although most commenters agreed that "human perceptibility" was the proper criterion for defining "visibility impairment," many objected that without further quantification, the term was vague or too subjective.

EPA intends that "humanly perceptible" impairment have a common sense meaning, i.e., it is impairment that generally can be perceived by people (such as park visitors). While it is true that human perception of a change in visibility may be subjective, it is this very perception by visitors to the mandatory Class I Federal areas that Congress sought to protect from impairment by manmade air pollution. There has been and still is ongoing documentation to relate instrument measurements to the human perceptibility factors. Perceptibility is based upon many different factors, such as the background and natural conditions and probably cannot be defined as a single value under all circumstances. Visibility in terms of reductions in visual range and contrast change have been demonstrated to be perceptible. For instance, documentation of human observations of reductions in visual range as small as 5 percent and a contrast change in the range of 0.01 to 0.04 have been reported.

Current efforts to describe visibility impairment in terms of coloration are promising, but are incomplete. Although several alternate definitions were offered, the Agency feels that at this time the definition which was proposed on May 22, 1980, represents the most reasonable and workable of all the definitions considered by the Agency. Those definitions proposed by commenters did not truely address the issue at hand, the definition of visibility impairment, but dealt more with methodologies, such as human observer panels, for determining whether or not visibility impairment existed. The use of human observer panels as a monitoring device is discussed below in Section 4.

A number of commenters suggested that the definition of visibility impairment should be the same as the definition of significant impairment. There are a number of reasons why the Agency has rejected this suggestion. First, the national goal calls for the remedying and prevention of _any_ impairment, whereas sources may obtain an exemption from BART if they do not cause or contribute to _significant_ impairment. Obviously, by the use of two different modifiers for impairment, Congress intended two different meanings. Congress chose to separate "significant" from "any" in Section 169A of the Act and it is appropriate that a distinction is made in the regulations. Even the dissenters to § 169A in Congress recognized this distinction. See H. Rep. No. 95-294, supra, at 528. Secondly, _any_ impairment (perceptible to humans) relates to any change in visibility that might interfere with the public's enjoyment, while _significant_ impairment relates to how much it interferes with the public's enjoyment. Thus, the definition of significant impairment includes considerations of such factors as when the impairment occurs, where it occurs, and how the visitors' use might be affected by the impairment. Lastly, while Congress was clearly concerned about substantial impairment and the visitors' visual experience of the mandatory Class I areas, it did not state that it was _only_ concerned with substantial impairment. Congress did, however, recognize that achievement of the national visibility goal could take a long time and that other considerations may affect the ability to achieve the national visibility goal in the near future. It therefore required the development of a long-term strategy which includes cost, remaining useful life of the affected source and other relevant factors.

Several commenters noted the fact that the definition for "significant impairment" and "adverse impact" are very similar. The two terms have two different applications in the regulations. "Significant impairment," for the purposes of Section 51.303, applies to mandatory Class I Federal areas and existing sources. "Adverse impact" applies to any Federal Class I area and new sources subject to the PSD requirements of Section 51.24. Additionally, "adverse impact" refers to a single major stationary source's effect on visibility, while "significant impairment" refers to existing conditions most likely resulting from several sources. The definitions are essentially the same because the same factors are to be considered in the determinations of whether a potential effect is an "adverse impact" or whether an existing impairment is considered "significant."

Several commenters argued that the inability to determine natural conditions rendered the definition of visibility impairment unworkable. While the Agency recognizes that the determination of natural conditions, as defined in this final rule, may be extremely difficult until the current monitoring research is complete, it is important to remember that (1) some knowledge has been gained through current research which can be used and must be considered in developing a monitoring strategy, and (2) these rules address only impairment which is reasonably attributable. The combination of knowledge gained and the restriction to reasonably attribute will enable the State to implement a visibility protection program even if it is admittedly somewhat limited. Phase II of the visibility program will necessarily require a much more precise determination of what is visibility impairment and what are natural conditions.

As explained in the Supplemental Statement to the proposal, EPA is including "contrast" in the definition of visibility impairment. Contrast is a directly measurable parameter and is mathematically interrelated to visual range. Therefore, EPA believes as a legal matter it can and as a policy matter it should include contrast in this definition.

4.2 EXISTING STATIONARY FACILITY

When EPA proposed visibility regulations on May 22, 1980, EPA had not yet finalized its PSD rulemaking in response to Alabama Power Co. v. Costle, 13 ERC 1993 (D.C. Cir. 1979). This latter rulemaking included, among other things, a definition of the term "major stationary source" under Section 169(1) of the Act for purposes of PSD review.

In the statement accompanying its definition of "existing major stationary source" in the May 1980, visibility proposal, EPA said that

> [a]ny change in EPA's proposed interpretation of section 169(1) for purposes of PSD may affect the definition proposed today for visibility [under section 169A(g)(7)] unless legal authority and differing program objectives would support different definitions for each program. 45 FR 34771

EPA noted that since Congress took the definition in Section 169A(g)(7) to a significant degree from that in Section 169(1), it was "appropriate" to examine what Congress intended under Section 169(1). EPA noted also that in Alabama Power the Court of Appeals had carefully examined Section 169(1) and concluded that Congress gave EPA latitude to define "source" to reflect, to a certain degree, the purpose and structure of the program for which the definition is intended. 13 ERC 2040.

EPA finalized its PSD regulations, including its proposed definition of "major stationary source" under Section 169(1), on August 7, 1980 (45 FR 52676). These PSD regulations changed somewhat the definitions proposed under Section 169(1). EPA's definition of "existing stationary facility" for purposes of this visibility rulemaking reflects most, but not all, of those changes in EPA's PSD regulations. EPA incorporates here by reference its response to comments on the PSD proposal under Section 169(1)[1] to the extent that response is relevant to comments EPA received on its proposed visibility definition of "existing major stationary source." EPA discusses the changes from its visibility proposal and responds to additional comments below.

Under Section 169A(b)(2)(A), EPA's visibility regulations must require certain "major stationary sources" to install BART if they were "in existence" on the Act's date of enactment (August 7, 1977) but had not been "in operation" for more than 15 years as of that date. Although the Act does not define "in existence," it does, in Section 169A(g)(7), define "major stationary source." EPA's proposal labeled this term "existing major stationary source" in order to avoid confusion with the definition of major stationary source in its PSD regulations. For this same purpose the final regulations label "existing stationary," facility for a source listed in Section 169A(g)(7).[2] No change has been proposed or promulgated in this rulemaking for the definition of major stationary source as defined in the PSD regulations.

The proposal followed the language of Section 169A(g)(7), which defines "major stationary source" as any one of a list of enumerated sources "with the potential to emit 250 tons or more of any pollutant."[3] EPA's interpretation of this language addresses both the term "potential to emit" and "stationary source."

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[1] 45 FR 52676 et seq., especially 52688-52698, 52703 (August 7, 1980).

[2] EPA is free to label these terms as it pleases "so long as the regulatory term is defined in a manner consistent with statutory requirements." See Alabama Power supra, 13 ERC at 200, n. 28.

In response to the Alabama Power court's decision, and consistent with EPA's September 5, 1979, proposed PSD regulations (44 FR 51924), EPA's proposed visibility regulations would have taken into account the application of control equipment in computing potential emissions. The proposal noted that EPA would assume that a facility's air pollution control equipment would function in the manner reasonably anticipated.

EPA is today promulgating this general approach, which was supported by public comments. Today's rule requires that operation of control equipment be a federally enforceable requirement. Thus, a company may receive credit for the application of control equipment only to the extent that the resulting reduction in emissions is federally enforceable. In summary, today's rule defines "potential to emit" as the ability at maximum design capacity to emit air pollution, taking into account any in-place control equipment. Design capacity, and thus potential to emit, may be further limited if control equipment better than that normally required by the applicable SIP is installed and a correspondingly more stringent level of emissions control becomes federally enforceable.

The preamble to the PSD regulations (45 FR 52688-9) discusses in detail the reasons why today's regulations recognize the ability of all federally enforceable limitations to constrain the potential to emit of a stationary source. That preamble also states the reasons why today's regulations, like the May 22, 1980, proposal and the PSD regulations, count fugitive emissions in determining the annual potential to emit. See 45 FR 52690-52693. The final definition of "potential to emit" announced today is similar to that promulgated in the August 7, 1980, PSD and nonattainment plan revisions.

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[3] One commenter complained that EPA's proposal impermissibly restricted the pollutants which could satisfy the 250 ton threshold to those "regulated under the Act." The Act, the commenter noted, speaks of any pollutant, not any regulated pollutant. Although EPA would expect little, if any, difference in the "real world" effect under the commenter's preferred definition and the one EPA proposed, EPA has accepted the commentor's point. An otherwise qualifying source would thus be an "existing major stationary source" under today's promulgation if, as Section 169A(g)(7) provides, it has "the potential to emit 250 tons or more of any pollutant."

EPA's proposed definition of "stationary source" in the rulemaking was "any building, structure, facility, or installation which emits or may emit any pollutant regulated under the Clean Air Act." EPA gave reasons for the definition in the statement accompanying the proposal.[4] There were no significant objections to this definition and EPA is today finalizing it.[5]

In May 1980, EPA proposed to define "building, structure, facility, and installation" as

> any grouping of pollutant emitting activities which is located on one or more contiguous or adjacent properties and which is owned or operated by the same person (or persons under common control).

EPA also proposed that a source would be treated as a new source if it was "reconstructed," which was presumed where the fixed capital cost of the new component exceeds 50 percent of the fixed captial cost of a comparable entirely new source. As the statement accompanying the May proposal explained in detail, EPA concluded that the proposed definition of "building, structure, facility, or installation" would serve Congressional intent and the purposes of Section 169A adequately by subjecting to BART those activities that were reconstructed between August 7, 1962, and August 7, 1977, provided they had the potential to emit 250 tons a year or more of any pollutant and fell within one of the listed 28 source categories. This followed from the proposed definition, EPA explained, "since 'source' would, in effect, mean any grouping of pollutant-emitting activities at one site and under common control." (original emphasis) 45 Federal Register 34771.[6]

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[4] See, also, the preamble to the proposed and final PSD regulations.

[5] For the reasons set out in footnote 3, EPA has deleted the requirement that the pollutant emitted must be regulated under the Act.

In August 1980, EPA promulgated identical definitions of "building, structure, and facility" for PSD and nonattainment areas. These terms mean "all of the pollutant-emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control)." (emphasis added). By "pollutant-emitting activities which belong to the same industrial grouping," EPA meant those activities that "belong to the same 'Major group' (i.e., which have the same two-digit code) as described in the Standard Industrial Classification Manual, ..."

EPA added this requirement of "belonging to the same industrial grouping" basically in response to comments that the proposed definitions would be too inclusive because they would group sets of activities at one site and under common control that are functionally or operationally distinct. Typical of the examples cited were: 1) a surface coal mine and coal-burning electrical generators that the mine supplies with coal, and 2) a primary aluminum ore reduction plant, an aluminum fabrication plant, and an aluminum reclamation plant. Under the final definition, however, these nominally different sets of activities would fall into a different two-digit category.

EPA has today adopted the PSD and nonattainment area definition of "building, structure, and facility" for the visibility program. The reasons are those given in the preamble to the PSD and nonattainment area promulgation.[7] EPA intends that its interpretation of "building, structure, and facility" be identical to that for "building, structure, facility, or installation" used for PSD purposes. See 45 FR 52693-52696 (August 7, 1980).[8]

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[6] By contrast, EPA intended its proposed PSD definition of source to apply only to all the activities at a plant, and not to apply, in addition, to any subgroup of those activities. 45 FR 52696 (August 7, 1980).

In the August 7, 1980, promulgation, EPA defined for PSD the term "installation" the same as it had "building, structure, and facility." For nonattainment areas, however, EPA defined "installation" to mean "an identifiable piece of process equipment." Thus nonattainment requirements would apply to a new piece of equipment that would emit "major" amounts of a pollutant for which the area had been designated nonattainment, regardless of any accompanying emissions offsets at the plant. Referring to Alabama Power, EPA stated that the fundamental difference between the nonattainment provisions (which are designed to reduce emissions) and the PSD provisions (which are designed to maintain air quality within the applicable increments) required this different approach to defining the sources subject to the nonattainment provisions. 45 FR 52693-52698.

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[7] 45 FR 52693-52698. Obviously, some of the reasons advanced in support of the definition are peculiar to the PSD or nonattainment programs. Alternatively, some of the reasons discussed that arguably do not favor this definition are also peculiar to the PSD or nonattainment programs. EPA has considered those differences and concluded that a similar definition is nevertheless warranted for this rulemaking. EPA also believes regulatory uniformity, where possible, is a virtue. As discussed below, however, EPA concluded that a difference in legislative mandate required a different definition of "installation" for the visibility program and the PSD program.

[8] Thus, for example, today's definition of "secondary emissions" is similar to the PSD definition of that term. See 45 FR 52695-52696. The only change from the PSD definition reflects the fact that under the visibility regulations only existing, as opposed to new, sources are affected by the definition of "secondary emissions."

For similar reasons, as explained below, EPA has promulgated a definition of "installation" in this rulemaking identical to the one promulgated for nonattainment areas.[9] The primary effect of this nonattainment ("dual") definition of installation will be to subject to BART review those major additions that occurred between August 7, 1962, and August 7, 1977, at a plant, even if that plant was otherwise "grandfathered" from BART review (i.e., was "in operation" before August 7, 1962), if the addition had the potential to emit 250 tons a year of any pollutant and if the addition itself fell into one of the 28 source categories. Thus, the addition in 1965 to a powerplant of a fossil-fuel boiler of more than 250 million Btu per hour heat input would be subject to BART review if it had the potential to emit greater than 250 tons a year of any pollutant. On the other hand, the addition in 1965 of a reverberatory furnace would not be subject to BART review, even if it had the potential to emit more than 250 tons a year of a pollutant, unless the addition of the fixed capital cost of the reverberatory furnace exceeds 50 percent of the fixed capital cost of an entirely new primary copper smelter, as provided in the definition of "reconstruction." The difference, noted by commenters representing industry, arises because utility boilers are one of the 28 source categories listed in Section 169A(g)(7), but reverberatory furnaces are not. Thus, a reverberatory furnace added in 1965 could not be "major," unless its addition or modification amounted to a "reconstruction" of the primary copper smelter of which it is a part.

Since this definition of "installation" would subject to BART review more projects than would the plant-wide definition used for PSD purposes (including replacement facilities that would not be subject to BART review under a plant-wide definition), use of the definition is more consistent with Congressional intent regarding the visibility program. As explained in the visibility proposal, Congress structured the program so that the BART requirements would be an important mechanism for remedying existing visibility impairment.

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[9] EPA has also today promulgated a definition of "reconstruction" that is similar to the one promulgated for nonattainment areas. See 45 FR 52703.

The dual definition is consistent with Alabama Power and ASARCO Inc. v. EPA, 578 F.2d 319 (D.C. Cir. 1978). Alabama Power held that EPA had broad discretion to define the constituent terms of "source" so as best to effectuate the purposes of the statute. Different definitions of "source" can, therefore, be used for different sections of the statute. *See* 13 ERC at 2039. As EPA discussed in its proposal, a central, statutorily-stated purpose of the visibility program is to *remedy* any existing impairment of visibility, not merely to *maintain* existing levels of impairment. *See* Section 169A(a)(1). In fact, a retrofit requirement can logically be thought of only as a device to enhance, rather than maintain, an existing condition. The legislative history expresses an unmistakeable intent to "remedy" and "cure" existing levels of visibility impairment.[10] The 15 year grandfather provision was to avoid undue burden and cost. As EPA said in its proposal:

> Although the BART analysis itself considers the remaining useful life of the source, cost, and other factors, Congress decided that EPA should not be required by statute to require BART for all sources regardless of age as a minimum condition for SIP approval.
>
> Where a source has had an addition or reconstruction with the potential to emit 250 tons a year of a pollutant between August 7, 1962, and August 7, 1977, EPA believes that the implicit concern of Congress regarding remaining useful life does not apply to the new components at the site and that, therefore, Congress did not intend to "grandfather" such additions or reconstructions. Such a "grandfathering" approach would be without reason and could seriously undermine progress toward remedying existing visibility impairment. 45 FR 34771-34772.

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[10] *See*, e.g., House Report at 205-206; Conference Report at 155.

The dual definition, therefore, comports with the purposes of Section 169A of the Act.[11]

Moreover, Alabama Power and ASARCO taken together indicate that there is a distinction between Clean Air Act programs designed to enhance air quality and those designed only to maintain air quality. In ASARCO, the Court of Appeals for the District of Columbia Circuit struck down the definition of "source" for new source performance standards (NSPS), which had employed a "bubble" concept. An important element in the court's decision was its belief that the "bubble," by allowing emission units to escape NSPS, was inconsistent with the purpose of NSPS, which was to improve air quality. See 578 F.2d at 327-28. But in Alabama Power, the same court held that for PSD purposes, EPA may use a "bubble" approach, precisely because PSD is designed to maintain air quality and, therefore, deals with "a significantly different regulation and statutory purpose." 12 ERC at 2044.

Under this analysis, use of a plant-wide definition to escape BART review is inappropriate since a central purpose of the visibility program is to remedy existing visibility impairment. Congress itself pointed to this stark distinction between the PSD and visibility programs. It found that the PSD program would be inadequate to protect visibility because PSD requires no reduction in the emissions of, and thus no improvement from, existing sources currently contributing to unacceptable levels of visibility impairment. In addition, Congress believed that maintaining air quality within the Class I increments could in some cases still result in unacceptable visibility impairment. Thus, Congress had to and did authorize a separate and distinct approach to protect visibility.[12]

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[11] As the League of Women Voters said in agreeing with EPA's proposal regarding reconstructed sources: "A plant which was constructed in the 1950's that subsequently has been enlarged, is no longer the same facility that Congress intended to exempt from retrofit requirements."

[12] House Report at 205. As explained elsewhere in this notice and in the visibility proposal, Congress intended that the visibility and PSD programs work together to the degree possible.

Finally, promulgation of the dual definition follows the mandate of Alabama Power which held that, although EPA could not define "source" as a combination of sources, EPA had broad discretion to define "building," "structure," "facility," and "installation" to best accomplish the purposes of the Act. 13 ERC at 2039. This holding contemplates that one term (such as "building") may be more inclusive than another term (such as "installation"), and so a "building" may include many "installations." In this way, a "source" can, under Alabama Power, be composed of smaller "sources," yet not be a combination of sources. The dual definition fits into Alabama Power, since under EPA's definitional scheme, a "source" is either an individual piece of process equipment or the entire plant; it is not a combination of sources. That is, when deciding whether a source is subject to BART review, the reviewing authority must determine whether an individual piece of equipment, or the plant as a whole, was "in operation" after August 7, 1962, and "in existence" on August 7, 1977, and had the "potential to emit" 250 tons a year of any pollutant. A plant or individual piece of equipment meeting these criteria is a "source" subject to BART review. Thus, the plant itself is a source, not a combination of sources, although it may contain smaller sources.

4.3 RESPONSIBILITIES OF THE FEDERAL LAND MANAGER (FLM)

EPA's proposed regulations required a State to consult in many instances with the "affected" FLM (i.e., the FLM having authority over Federal land to which the State plan applies) before making a decision regarding its visibility protection program. EPA explained in the statement accompanying its proposal that although the State would retain final authority for development and implementation of the visibility protection program, the State's decisionmaking should be informed by the affected FLM's opinion since those FLMs would be familiar with the unique conditions and the importance of visibility values to a visitor's experience in the areas they manage.

EPA received a good deal of public comment on the proper role of the FLM. Industry and State commenters complained that the proposal created responsibilities for the FLMs that went beyond those detailed in the Act, and that in many cases would intrude on the Act's clear committment of a decision to the State. On the other hand, environmental commenters and members of the public urged an expanded role for the FLMs.

EPA continues to believe that although the State has primary responsibility for developing and implementing the visibility protection program, Congress intended that the State's decisions be informed by the FLM's recommendation. This is apparent from § 169A(a)(2), which requires the Secretary of the Interior to identify in the first instance the manadatory Class I Federal areas in which visibility is an important value, from § 169A(c)(3) which makes an exemption from the BART requirement effective only upon the affected FLM's concurrence, and most manifestly from § 169A(d) which requires the State to consult "in person" with the affected FLM before the public hearing on its SIP revision under § 169A, and to include a summary of the FLM's conclusions and recommendations in the notice to the public of the public hearing. Congress clearly felt that the FLM's had a special expertise to contribute, and wanted that expertise to be considered in the development and implementation of the visibility protection program. This makes sense. As EPA observed in the statement accompanying its proposal, in order for the program to work well, the FLM and the State must work together.

Congress recognized that FLM/State cooperation was necessary not only as noted above in connection with the visibility program in particular, but also in connection with the Act in general. Section 121 of the Act requires the State, in carrying out major SIP-related requirements of the Act (including protection of visibility), to "provide a satisfactory process of consultation with . . . any Federal Land Manager having authority over Federal land to which the State plan applies . . . ." The conference committee noted that it had specifically required the Senate to "include the Federal Land Manager in the consultation process with respect to Federal lands."

In response to comments from industry and States, but in keeping with Congress' desire that the affected FLMs be heard on State decisions regarding the lands they manage, the final visibility regulations delete a number of the repeated references to FLM consultation.[13] However, many of the consultation requirements that have been deleted are subsumed under the general provisions, explicitly required by the Act, that the State consult the affected FLMs on its plan revision before the public hearing and notify the public of the affected FLM's recommendations. EPA believes that none of the deleted provisions for consultation are required as a minimum condition of plan approval. Also, their deletion may help avoid cumbersome or unnecessary FLM consultation requirements and the appearance that States are not to be trusted--none of which EPA intended in its proposal.

Several private citizens expressed a concern that the thirty day period for review of a new source permit application by the Federal Land Manager was not adequate. These commenters recommended up to one year for the Federal Land Manager to review the new source permit. However, since the State must perform an analysis of the anticipated visibility impacts on the Federal Class I areas at the same time as it is reviewing the permit application, the entire process may easily take up to ninety days based on the proposed regulations. Although the Federal Land Managers could possibly prepare a better analysis if they had one year to review a new source application, in many cases this would conflict with existing State laws for the processing of permits which require that the State approve or deny the permit within 90 days of its receipt. In addition, extending the time period to one year would put a large burden in terms of delay and construction costs on any company planning to construct.

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[13] In particular, EPA has deleted the proposed requirement that the State document why it did not accept the FLM's recommendation that visibility impairment is reasonably attributable to a source. This provision received the most objection from State and industry commenters. The other role the proposal gave the FLMs that received great objection from industry and State commenters was to identify existing visibility impairment in the areas they manage. EPA has retained this provision, however, since under Subpart C of the Act Congress gave the FLMs the role for characterizing the impairment in the areas they manage. It is the State, however, that decides whether that impairment is attributable, and weighs the various cost and benefit factors in determining the appropriate remedies under § 169A. The State, of course, may also identify impairment.

It is anticipated, however, that prior consultation between the State, source, and the Federal Land Manager will take place before the complete New Source Review permit application is filed. In many cases preapplication meetings are held which would allow some additional time for consultation even prior to submitting any formal information regarding the new source. The prior consultation would be beneficial in resolving any potential problems which might arise concerning visibility in the permitting process. This would also alleviate what appears to be a rather tight time constraint for all parties concerned.

There were comments about a possible veto power by the Federal Land Manager over new source permits for sources which might impact on visibility in the Federal Class I areas or on the integral vistas. This is mistaken. The State must consider any analysis performed by the Federal Land Manager. There must be consultation between the Federal Land Manager and the State during the permitting process. The language in the regulations has been changed from the proposal in order to clarify the respective roles of the Federal Land Manager and the State. In no sense, however, does the Federal Land Manager have veto power over the new source permit. Section 165(d) of the Act gives final authority to the State in a case where the Class I increment is not violated. However, the State may choose to deny the application, condition the permit, or require visibility monitoring based on the comments of the Federal Land Manager.

Furthermore, if the State is not satisfied with the Federal Land Manager's demonstration of adverse impact, then the State must give its reasons why the State did not deny the new source permit application. Section 165(d), however, does not cover integral vistas. The protection required by Section 307 of these regulations regarding integral vistas allows the State to consider cost, energy, and other relevant factors.

Several commenters stated the Federal Land Managers should have no part in the new source review process at all. These comments came from both industry and States. As earlier stated, Section 165(d) of the Clean Air Act clearly gives the Federal Land Manager an affirmative responsibility to protect Federal Class I areas from visibility impairment. Congress placed responsibility with the Federal Land Managers since they are the most familiar with the characteristics of the Class I area and are charged by law with managing the areas.

There were also commenters which stated that the Federal Land Managers did not have the technical expertise to make recommendations or evaluations relating to air quality values. As noted, the Federal Land Managers are the appropriate persons to make certain recommendations since they are responsible for the Federal Class I areas. The Federal Land Managers also have experienced staff or access to expertise to aid them in making the technical recommendations and evaluations which need to be made in relation to visibility protection. To the extent affected Federal Land Managers cannot document their conclusion that a new source would cause an adverse impact on visibility, the State is of course less apt to be satisfied with the Federal Land Managers' demonstrations.

One commenter was concerned that the Federal Land Manager could stop new projects by identifying a new integral vista. The identification of a new integral vista by the Federal Land Manager does not affect the new source unless the integral vista was identified more than six months prior to submission of a complete permit application. Therefore, the submission of a permit application, the entire process may easily take up to ninety days based on the proposed regulations. Although the Federal Land Managers could possibly prepare a better analysis if they had one year to review a new source application, in many cases this would conflict with existing State laws for the processing of permits which require that the State approve or deny the permit within 90 days of its receipt. In addition, extending the time period to one year would put a large burden in terms of delay and construction costs on any company planning to construct.

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One commenter was concerned that the Federal Land Manager could stop new projects by identifying a new integral vista. The identification of a new integral vista by the Federal Land Manager does not affect the new source unless the integral vista was identified more than six months prior to submission of a complete permit application. Therefore, the submission of a complete new source permit would not be affected by the Federal Land Manager's identification of a new integral vista. Close coordination between the State and the source making the application will preclude any unforeseen situations which might cause an application to be considered incomplete or unsatisfactory.

One commenter stated that the Federal Land Manager would have control over future energy development around Federal Class I areas. The Federal Land Manager will be responsible for characterizing visibility in these areas and identifing integral vistas, but it will be the State that makes the final decision to approve or disapprove a permit application where the source may impact on an integral vista associated with a mandatory Class I Federal area. The State may consider energy and other factors in determining the appropriate degree of protection for an integral vista under § 169A.

There were several comments which expressed the opinion that the role of the Federal Land Manager should be strengthened in the regulations. Most of these commenters were concerned citizens and several were from citizen's groups. It is felt that the role of the Federal Land Manager, as outlined in the final regulations, is a strong one, but to add to it would intrude on the authority of the States as set forth in the Act.

4.4 INTEGRAL VISTAS

4.4.1 Summary

Under the authority of Section 169A, the final regulations require the States to protect the integral vistas of any mandatory Class I Federal area from visibility impairment caused by new or existing sources. This protection must be adequate to make reasonable progress toward the national visibility goal over 10-15 years considering the cost of compliance, the time necessary for compliance, the energy and nonair quality environmental impacts of compliance, the remaining useful life of the source, and the degree of improvement in visibility anticipated to result from control. A State in its initial SIP revision would have to protect an integral vista only if it was notified of the integral vista at least six months before plan submission. With regard to permitting new sources, integral vistas identified at least six months before submission of a complete permit application would have to be protected. Under the final regulations, integral vistas are not protected under the provisions of Section 165(d).

4.4.2 EPA's Proposal

The proposed regulations would have required a State to protect any integral vista--defined as a view from within a Class I area of a scenic landmark located outside the area's boundary--identified by the Federal Land Manager within 90 days of promulgation, unless the State in its SIP demonstrated to the Administrator that the Federal Land Manager did not identify the integral vista according to certain criteria EPA proposed for comment. A vista identified by the Federal Land Manager more than 90 days after promulgation would under the proposal have had to have been protected from visibility impairment not later than at the time of the periodic review of the long-term strategy.

In its statement that accompanied the proposed regulations, EPA described in detail its approach to integral vistas, as well as alternatives to the proposed approach. See 45 FR 34775-34776. EPA recognized that the issue would be controversial on both policy and legal grounds.

Specifically, with respect to the legal authority for its position, EPA noted that it was aware of comment that Congress did not intend to protect integral vistas under Section 169A(a)(1) which limits the geographic extent of the visibility to be protected to that "in" mandatory Class I Federal areas. EPA replied that protecting integral vistas under authority of Section 169A(a)(1) was 1) consistent with the statutory language because visibility is a perceptual value that occurs "in" the Class I area; and 2) supported by the legislative history of

Section 169A and much of the legislation creating the Class I areas, both of which allude to Congress' desire to protect extensive vistas and expansive scenic views.

4.4.3 Public Comment

No single aspect of EPA's proposal received more comment than this issue of integral vistas. A large number of individuals supported protection of integral vistas (many also urged protection for views from outside the Class I area looking into the area), as did several environmental groups and the Department of the Interior. These persons noted that one's views while in an area do not stop artificially at the area's perimeter, and that the ability to see distant objects is often central to the visitor's enjoyment of an area. These persons did not, however, make any significant arguments as to EPA's legal authority to protect such vistas under Section 169A other than to cite with approval the rationale EPA set out with its proposal.

Other commenters, including most of those representing States and industry, opposed the requirement for protection of integral vistas.[14] They argued that Section 169A provides only for visibility protection "in" mandatory Class I Federal areas, and by definition objects of integral vistas lie outside the area. Since Congress was obviously concerned with limiting its untested, potentially costly visibility program, it would make no sense, these commenters said, to infer that Congress by implication intended to protect integral vistas and thereby dramatically increase the land area to which the visibility regulations would apply.

Congress, it was argued, referred directly to adjacent areas (as in Section 165(e)) when it, in fact, had them in mind. Here, Congress expressly precluded in Section 169A(e) a requirement for uniform buffer zones. Finally, since such regulation would subject non-Federal lands to Federal land use restrictions without any express grant of authority by Congress, constitutional issues of state sovereignty would be raised under the tenth amendment, as well as issues of compensation for taking of private land under the fifth amendment.

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[14] The United States Department of Agriculture and the United States Department of Energy also opposed this requirement.

These commenters also expressed policy reasons for opposing required protection for integral vistas. A requirement that integral vistas be protected under § 165(d) could, they said, greatly expand the number of new facilities affected, the number of prime sites (including prime sites for energy-producing facilities) foreclosed, and the incremental costs for new sources. This would result they contended, because under § 165(d)(2)(C)(ii) a permit would have to be denied if an adverse impact of an integral vista would result. Additionally, some States objected to what they viewed as undue intrusions by EPA into the traditional State area of land use regulation. At the same time, however, many industry and State commenters, while disputing the authority and wisdom of protecting integral vistas under Section 169A, recognized that there may be areas outside mandatory Class I Federal areas where visibility is an important aesthetic value and should be protected. If integral vistas are to be protected, these commenters concluded, the States should be allowed to balance competing interests such as energy and economic concerns.

4.4.4 EPA's Response

After careful review of the extensive comments sought and received on this issue, the Administrator has determined that Congress did intend that the States protect the integral vistas of mandatory Class I Federal areas under § 169A. EPA agrees with the industry and State commenters to the extent that the State, in determining the appropriate measure of protection for any integral vista, may consider competing interests such as the cost and energy effects. This is because protection for integral vistas is authorized and being required under Section

169A--which requires only that "reasonable progress" (a term that allows "balancing" of interests) towards the national visibility goal be assured and not, as originally proposed, also under § 165.

For the reasons set out in the statement accompanying its proposal, EPA believes visibility "in" (§ 169A(a)(1)) a mandatory Class I Federal area includes integral vistas. Although § 165(d) speaks of the air quality related values (including visibility) "of" a Federal Class I area, in light of public comments the Administrator has concluded that Congress did not under § 165 intend similar protection of integral vistas. This different interpretation is based on legislative history and the statutory framework indicating Congress' intent that the substantive requirements of Section 169A be a "separate approach" from that in Section 165, which deals with the PSD program. H. Rep. No. 95-294, 95th Cong., 1st Sess. at 205.

Visibility protection in the PSD program is under § 165(d). This language in § 165(d) concerning the "air quality-related values (including visibility) of a Class I area" came from the 1977 Senate bill. Neither the 1976 nor 1977 Senate bill, however, contained the parenthetical reference to visibility as an air quality-related value. In fact, neither the 1976 Senate Report nor the 1976 Conference Report discussed visibility as a protected value. The parenthetical inclusion of visibility was only added in conference in 1977. By contrast, § 169A was present in the 1977 House bill, and was fully considered by both the House and conference committee. It, therefore, appears to the Administrator that the careful policy considerations and choices made by Congress in § 165(d), which were limited to the physical boundaries of Class I areas, focused on air quality-related values apart from visibility, and that by adding visibility to § 165(d) Congress did not intend to extend coverage of that provision beyond the geographic boundaries of the areas. It is unlikely that Congress intended to include integral vistas by use of that term.

This conclusion is also supported by the stringent requirement in Section 165(d)(2)(C)(ii) that the State deny a PSD permit to construct if it is satisfied with the Federal Land Manager's demonstration that an adverse impact on air quality-related values would result. As the Senate report shows, Congress was aware that with this provision it was giving the Federal Land Managers a "powerful tool" which should be wielded "aggressive[ly]" to "protect the air quality-related values for future generations." S. Rep. No. 95-127, 95th Cong., 1st Sess. at 36. To conclude that in this section, Congress contemplated that integral vistas were protected as part of the Class I area ignores the origin of this language, and would thereby greatly magnify the potential effect of an already powerful statutory provision. The Administrator believes, rather, that Section 165 represents a deliberate balancing by Congress of air quality-related values (apart from visibility) and other factors, a balancing premised on the known geography and boundaries of Class I areas, which did not include the concept of integral vistas.

In § 169A, by contrast, Congress was focusing specifically on visibility, and had the occasion to make the policy choices and balances with respect to visibility in particular. As noted in the proposal (45 Federal Register 34776), the legislative history of § 169A indicates that in making these choices Congress did include protection of integral vistas of mandatory Class I Federal areas. The balance it struck, however, was different from that in § 165(d). Instead of deciding conclusively that air quality related values within the boundaries of these areas could not be adversely affected [§ 165(d)(2)(c)(ii)], Congress in § 169A provided for protection of all visibility values in mandatory Class I Federal areas (including integral vistas), but limited the protection by requiring only reasonable progress towards the national goal, and by leaving the balancing to the SIP process under § 169A. Unlike the conclusive balance of § 165(d)(2)(c)(ii), the reasonable progress criterion allows the State to balance costs, energy concerns, and other factors.

This interpretation will not inappropriately curtail energy or other economic development, as some commenters predicted, because today's rule (unlike the proposal) protects integral vistas only under § 169A, which allows the State to balance energy and economic costs, among others.

Because under § 169A most new major sources will be reviewed for their affect on integral vistas previously identified, the situation would not result, as EPA erroneously suggested in the statement accompanying its proposal, in such vistas being protected by one program under § 169A and impaired by another under PSD. Rather, these integral vistas will be protected fully under § 169A, which covers both existing and new sources.

Since the protection these regulations give integral vistas hardly amounts to making them "buffer zones," let alone "uniform" buffer zones, they are not precluded under § 169A(e). See, also, 45 Federal Register 34776. In response to other comments, EPA notes that since § 169A protects only visibility "in" an area, the protected perception must occur in an area and cannot, as many commenters urged, include perceptions of the area from outside the area's boundaries.

Finally, since Congress has authorized the protection of integral vistas, and since these regulations give the States freedom to balance energy, economic and other relevant factors regarding the measure of protection afforded, the Administrator does not believe that the arguments of one commenter concerning the constitutional issues that would be raised if such were not the case now raise serious questions. See e.g., McCoy-Elkhorn Coal Corp v. EPA, —F.2d.— (6th Cir. 6/2/80) regarding Congress' authority under the commerce clause. In particular, the Administrator notes that, without violating the Fifth Amendment, the Federal government may execute laws that affect economic values or property interests. As the United States Supreme Court said in Penn Central Trans. Co. v. New York City, 438 U.S. 104, 124 (1978), a taking is unlikely when "interference [with property] arises from some public program adjusting the benefits and burdens of economic life to promote the common good."

4.4.5 How It Works

Today's promulgation allows the Federal Land Manager to identify "integral vistas" according to criteria the Federal Land Manager develops. Any integral vista must be important to the visitor's visual experience of the area.

In response to numerous comments that the public should be able to participate in this identification process, the final rule requires notice to the public and an opportunity for public comment regarding the criteria for identifying an integral vista. After the Federal Land Manager identifies an integral vista, the Federal Land Manager must notify the State. Unless the State determines that the Federal Land Manager's identification was not in accordance with the criteria, the State must list the integral vista in its SIP, and require in its revised plan measures that would protect from visibility impairment any integral vista the Federal Land Manager identified at least six months before plan submission. Any integral vista the Federal Land Manager identified later would have to be listed in the State plan at the earliest opportunity, unless the State found the identification unreasonable.

The State plan must also protect the visibility values of any integral vista from impairment caused by a new source reviewed under § 51.307 of the final regulations where the integral vista was identified at least six months before submission of a complete permit application. EPA has added this six months notification requirement in response to comments that it would allow time for the business planning proposed new sources need. Any shorter period would create too much uncertainty for new sources.

EPA also proposed that no integral vistas could be identified after December 31, 1985, by which time EPA was advised the Federal Land Managers would have completed their development of certain area management plans which could lead to identification of additional integral vistas. EPA is retaining this provision in response to comments that it provides additional certainity for new sources.

Since, as noted above, the requirement for protection of integral vistas comes from Section 169A, measures the State adopts to protect such vistas may reflect consideration of the costs of compliance, the time necessary for compliance, the energy and nonair quality environmental impacts of compliance, and the remaining useful life of any affected existing source and equipment therein.

4.5 LONG-TERM STRATEGIES

Some of the commenters felt the periodic review of the long-term strategy should be every five years instead of every three years. The Agency believes that research and technology is progressing so rapidly in the area of visibility cause, measurement, and control that three years is a reasonable time period to review the State Implementation Plan. Congress was vitally concerned that progress toward the national visibility goal begin as soon as possible. See H. Rep. 95-294, supra at 206. What is required is review, not total revision, every three years. This review may suggest that only a partial revision to the State's visibility regulations is appropriate.

One commenter suggested that the affect of new sources on visibility in the mandatory Class I Federal area, as required by the long-term strategy, should not be affected by visibility impairment caused by sources which existed prior to August 7, 1977. In particular, this commenter said, the long-term strategy should not be affected by sources causing visibility impairment which existed prior to August 7, 1962, and which are therefore exempt from mandatory application of BART. It is reasonable and necessary, however, to consider present visibility impairment in planning and developing a SIP and in the long-term planning in order to make reasonable movement toward the national visibility goal, and there is no basis in the Act for ignoring these sources. Under Section 169A(b)(2) of the Act, the visibility regulations must "...require each applicable implementation plan for a State . . . to contain such emission limits, schedules of compliance, and other measures as may be necessary to make reasonable progress. . . ." To consider new sources in the absence of existing sources would lead to a confusing, misdirected program that would not assure reasonable progress toward the national visibility goal, as the Act requires. Although such sources are not subject to the mandatory BART requirement, they may need to be controlled to make reasonable progress toward the national visibility goal.

One commenter stated that parties other than the Federal Land Managers should be consulted during review of the long-term strategy. Before any SIP could be revised there would, however, be a public comment period and a public hearing where a citizen or industrial representative could comment on the SIP revision. There is nothing in the regulation to prohibit participation by a person or group in the SIP revision process.

One commenter said the long-term strategy unduly interferes with State prerogatives. In fact, the visibility regulations give the States a great deal of flexibility in determining the measures they choose to assure reasonable progress toward the national visibility goal. As the Act requires, EPA has provided measures for the States to consider, but left the actual "mix" of measures adopted to the States' discretion.

4.6 BEST AVAILABLE RETROFIT TECHNOLOGY

A number of comments were received on the concept of Best Available Retrofit Technology (BART). This is part of Section 51.302 dealing with State Implementation Plan (SIP) revision requirements.

Several members of the public, industry, and agencies complained that the SIP revision cannot be accomplished in nine months as the regulations require. The nine month time frame is manadatory (Section 406(d)(2)(B)) in the Clean Air Act (CAA) amendments of 1977. Therefore this time cannot be extended by rulemaking. Although EPA recognizes that the nine month time period is tight, States should be able to meet it given the limited scope of this first phase of the visibility protection program.

Several commenters were concerned that cost would not be considered in the BART analysis. In fact the BART guidelines, Part I and Part II, as well as the regulations, require retrofit costs to be considered. In addition, Section 51.302(c)(4)(iii) states: "If the State determines that technological or economic limitations...to a particular existing stationary facility would make the imposition of an emission standard infeasible it may ...instead prescribe a design, equipment, work practice, or other operational standard, or combination thereof, to require the application of BART." Costs will be determined on a case by case basis.

One element of EPA's proposed long-term strategy was that the State must review the affects on visibility of any pollutant emitted by an existing major stationary source when the Administrator determined that new technology is reasonably available to control emissions of that pollutant. The State would then have to set an emission limitation representing BART for that pollutant _if_ no control had previously been required for that pollutant pursuant to a BART analysis. EPA explained in the statement accompanying its proposal that the purpose of the requirement for review was to ensure that States consider new technology as it becomes reasonably available. In addition, EPA discussed some problems with its proposed approach, listed alternative approaches, and encouraged commenters to discuss the legal and policy bases for any alternative they would recommend.

Most commenters did not address this issue, and the response from those that did were mixed. Representatives of industry complained that there was no authority for the requirement because 1) once BART emission limitations are set, a source's obligation is limited to "maintain[ing]" those limitations, § 169A(b)(2)(A), 2) the clear implication from the requirement in § 169A for BART and long-term strategies is that BART is independent of the latter requirement and, once imposed, a state cannot be forced to impose new limitations under its long-term strategy; and 3) where Congress wanted reanalysis, as in § 111(b)(1)(B), it said so explicitly. In addition, one State complained that the requirement would be a "moving target" that would subject sources to uncertainty. On the other hand, representatives of environmental groups supported the requirement, as did several other members of the public.

Today's rule retains the requirements that the State must reanalyze for BART each pollutant for which no control under the visibility program has previously been required. The requirement is merely a recognition that certain emission control devices for a pollutant like NO_x that contributes to visibility impairment may not be available now, but may be available later. The requirement is not one of "re-BARTing," but is simply one of timing the initial imposition of control representing BART. The requirement has been moved from the section on long-term strategies to the section on BART requirements to clarify this.

Today's rule, unlike the proposal, does not require that a pollutant for which a BART emission limitation has been set be reviewed when the Administrator determines that new, more-effective control technology for the pollutant is reasonably available. The proposal did require a review in such a case because a State would be free under § 116 to require additional controls for a pollutant even where BART had previously been determined for the pollutant. Today's rule omits this requirement in response to comments and to eliminate the above-mentioned confusion regarding "re-BARTing." In addition, EPA believes the Act does not mandate such a requirement as a minimum condition of plan approval. EPA continues to believe that review and, where appropriate, recalculation of the BART emission limitation when the Administrator determines new control technology is reasonably available could be a good measure for a State, in its discretion, to adopt as part of its long-term strategy, regardless of the control history of the pollutant of concern.

Some commenters suggested that the State periodically review existing stationary facilities to determine if new technology is applicable. The Agency does not believe that this is appropriate because a substantial burden would be placed on the State to examine new technology, whereas the Administrator under Section 111 of the Clean Air Act is already charged with this responsibility. The Agency expects that the Administrator's decision to call for reanalysis will be usually based on promulgation of additional new source performance standards and on an analysis of their applicability to existing stationary sources.

4.7 PRESCRIBED BURNING

Many comments were received concerning prescribed burning. Almost all the comments received were opposed to any further regulation of prescribed burning. It was argued that prescribed burning is not a major source, is preferable to wildfires, is part of good forest management, and is preferable to chemical and mechanical methods of land preparation. Fire, these commenters noted, is part of the natural background, and regulation of prescribed burning was not intended by Congress.

Although the Agency agrees that forest fires occur naturally, prescribed burning by definition is accomplished by man for the purpose of conducting business. Much of the forestry industry burns the nonuseful portion of trees after harvesting. Agricultural burning is also accomplished for the purpose of preparing fields for use by man. Since these are done primarily for man's convenience and indeed to man's advantage, prescribed burning must be considered a manmade cause of visibility impairment.

EPA continues to recognize, however, that prescribed fire is an ecologically sound forest and management tool used both inside and outside Class I areas. The Agency does not intend that prescribed burning be eliminated or unnecessarily restricted, but only that its affects on visibility be reduced where the State determines it is feasible and appropriate to do so. Specifically, the final visibility regulations require the State to consider the impact of prescribed burning on visibility in the mandatory Class I Federal area and to examine, and adopt if necessary, regulations which would define the most efficient, environmentally sound methods for disposing of agricultural and forest wastes so as to reduce the effect of the burning on visibility.

The requirement for consideration of prescribed burning is only in the long-term strategy. As noted, the State must consider smoke management techniques for agricultural and forestry management purposes. However, as the comments recommended, the language "including such plans as currently exist within the State for the purposes" was added to ensure consideration of existing smoke management systems and regulations. The long-term strategy requirement for examination of smoke management techniques cannot be deleted because of the large potential impact on visibility of mandatory Class I Federal areas. As with other elements of the long-term strategy, the State shall take into account the costs of compliance, nonair quality environmental impacts and so on. Judging from the comments received, all these factors would affect a management program.

4.8 PHASED APPROACH

Comments were received from industry, citizens groups, and private citizens concerning the phased approach to regulatory development for visibility impairment. Most of the comments favored the concept itself. Some of the industrial commenters, however, suggested alternate timetables for Phase I. Two of the industry commenters felt more research should be done even before Phase I rulemaking is promulgated. Many industries felt that EPA should postpone substantive requirements for five years. Several commenters even offered schedules for the Agency to follow in the interim until the final regulations were promulgated. EPA did not accept these suggestions since there is sufficient information and data available to start the process of developing State Implementation Plans (SIP) for the control of reasonably attributable visibility impairment. As a result, EPA must not postpone what it can do now since, as Congress recognized, "if the [national visibility] goal is ever to be achieved, progress in that direction must begin now." H. Rep. No. 95-294, supra, at 206.

Some commenters suggested that additional guidance is needed before a BART analysis under Phase I could be completed. These commenters failed to recognize the limited scope of these regulations. The Agency agrees that further research will be necessary before one can accurately identify and control sources which cause or contribute to all types of visibility impairment, but Phase I does not require such comprehensive knowledge. Reasonably attributable impairment can be addressed now and in some cases controlled without a detailed knowledge of natural conditions or frequency of impairment, as discussed elsewhere in this response. (It should be noted, for example, that while "significant impairment" takes into account the frequency of impairment, a precise forecast of "frequency" may not be necessary since it is likely that any impairment would be considered significant unless it occurred at such times or such places that it did not interfere with the public's enjoyment of the area). The phased approach does allow additional time for research in the areas needed.

Several commenters wanted a specific date for Phase II. It is impossible, however, to set a date for addressing problems such as regional haze and urban plumes until more research has been conducted and the results evaluated. The Agency is working towards the development of Phase II of the regulations, but monitoring techniques must be improved in order to provide a data base on specific levels of visibility impairment as the result of multiple sources problems. Models of complex sources need additional research and are not available at this time.

4.9 TECHNICAL GUIDANCE

There were commenters who responded on issues of technical guidance for the proposed visibility regulations. Most of these comments addressed the modeling and monitoring aspects that are needed to support or demonstrate compliance with regulations which will be developed by the States. There were also comments by States and private citizens that guidance and additional data were needed in this area to properly develop a revision to the SIP.

4.9.1 Lack of Technical Tools and Scientific Data

Several of the State agencies felt that the cost of monitoring and equipment for the SIP revisions and for the long-term strategy would be an excessive financial burden on them. The mechanism in § 105 Grant applications is available to request additional funding from EPA for this equipment.

EPA agrees that further research and additional technical tools in the area of visibility impairment are needed, and is committed to continuing research in order to provide these tools. However, EPA feels the necessary technical tools are available now to perform, within the Phase I program, a case-by-case analysis on sources impacting on visibility of mandatory Class I Federal areas and new sources which may impact on Federal Class I areas.

4.9.2 Modeling Guidance--Workbook for Estimating Visibility Impairment and Users Manual for Plume Visibility Model

It should be pointed out that although EPA solicited and received comments on certain modeling guidance in connection with the proposed regulations, the final regulations do not require the State to use such guidance. Since a State may, in its discretion, use the guidance in implementing the visibility program, EPA has revised the guidance in response to comments, and provided the following discussion of comments on this guidance as well.

Several commenters stated that visibility modeling is inaccurate, if not impossible, in areas of complex terrain and at distances greater than 50 km from a source. We agree that the uncertainty associated with the use of Gaussian models increases as the distance from the source increases and in areas of complex terrain. Modeling of plume dispersion at distances of up to 100 km ideally would consider the spatial and temporal variations in windspeed, wind direction, and stability that no doubt have an influence on plume dispersion. However, as stated in the Workbook, data with this kind of resolution are rarely, if ever, available because of cost considerations connected with data collection. Since σ_y and σ_z curves are derived largely from atmospheric diffusion experiments at close range, uncertainties certainly do exist in their application at distances more than 50 km from a source.

It is clear that complex terrain can dramatically influence plume transport and dilution. As noted in the Workbook, complex terrain can result in channeled or trapped flows and enhanced plume dilution due to mechanical turbulence.

All of the above notwithstanding, we believe that realistic estimates of visibility impairment can be made using the Workbook and PLUVUE model. Considerable flexibility is built into the model so that the user can account for complex meteorology. For example, the user can adjust diffusion coefficients on the basis of measured plume or tracer data. Also, the user has other techniques to account for changes in meteorological conditions. It should be noted that none of the commenters offered an alternative to the Gaussian model.

There were also several comments on the use of the contrast/contrast change criterion of 0.1 and the $\Delta E(L^*a^*b^*)$ criterion of 4 for worst-day impacts was questioned. If visibility impairment resulted in a contrast/contrast change of 0.1 on the worst day in a year, considering typical frequency distributions of impact, one would expect that perceptible impairment would occur, but only a few days per year. Thus, these criteria are considered to be reasonably conservative definitions of the magnitude and frequency of occurrence of visibility impairment that would not be judged significant or adverse. The criteria are not meant to be interpreted as "perceptibility thresholds." Modern psychology discounts the notion that there is a clearly defined threshold below which a stimulus does not produce a response.

There were some comments that since Gaussian models in some cases cannot accurately predict ground-level concentrations, this represents evidence that plume visual effects cannot be predicted with a Guassian model. This argument is not necessarily valid because with visual effects we are concerned primarily with plume centerline line-of-sight integrals, not with ground-level time-averaged concentrations. For typical line-of-sight geometries the visual impact is largely independent of the assumed plume width (σ_y) and is dependent only on the vertical depth of the plume (σ_z). Thus, several sources of uncertainty are eliminated in visibility modeling vis-a-vis air quality modeling.

Several commenters stated that because of approximations made to compute the diffuse radiation field, the model is inappropriate. Although diffuse radiation calculations affect the absolute intensity (radiance) of the sky or other viewed object, the relative changes in sky intensity caused by air pollution are not sensitive so the accuracy of the diffuse calculation. Virtually all of the visibility impairment parameters are relative intensity measures (via., contrast, blue-red ratio, visual range, and ΔE). Indeed, recent work suggests that the simple formulas that neglect multiple scattering are as accurate in predicting these relative measures as the more sophisticated models. It should be noted that even though calculations are insensitive to diffuse intensity calculations, model comparisons with measured sky intensities show that the diffuse radiation approximation used in PLUVUE is reasonably accurate.

One commenter questioned the use of the lowest magnitude of impact associated with a given class of meteorological conditions in cumulative frequency distributions. It is appropriate to use the lowest magnitude of impact associated with a class of meteorological conditions when cumulative frequency distributions are plotted. For example, if windspeeds less than 2 m/s occur 10 percent of the time, we would say that the cumulative frequency of impacts greater than that associated with 2 m/s is 10 percent. We would not select the magnitude associated with, say, 1 m/s winds to characterize this point on the cumulative frequency distributions.

Finally there were some comments on the assumption that visual range and ambient ozone concentrations are independent of windspeed, wind direction, and stability. Of course visual range is not completely independent of meteorological conditions. However, for nonurban sites visual range is largely independent of wind direction and stability (time of day) and that only at very high windspeeds (>10 m/s) does visual range decrease, presumably due to windblown dust. EPA is not aware of any studies of the dependence of nonurban ozone concentration on meteorological conditions. Certainly if one has an extensive data base, one would be advised to compile a five-way joint frequency distribution of windspeed, wind direction, stability, ozone concentration, and background visual range, and to use this joint frequency distribution to determine the frequency of occurrence of worst-case conditions.

4.9.3 Monitoring Guidance

It should be noted that although EPA solicited and received comments on certain monitoring guidance in connection with the proposed regulations, the final regulations do not require the State to use such guidance. Since a State may, in its discretion, use the guidance in implementing the visibility program, EPA has revised the guidance in response to comments, and provided the following discussion of comments on this guidance as well.

The majority of comments on the subject of visibility monitoring expressed the opinion that any guidance on visibility monitoring was premature. Many of these same commenters believed the "Interim Guidance for Visibility Monitoring" (interim guidance) contained insufficient information to establish an active monitoring program.

The interim guidance is just that - interim. It was not intended that the document be a specific, all encompassing guidance on visibility monitoring. Rather, it recommends and discusses methodologies and techniques which would be useful to those parties which desire, or find it necessary, to monitor visibility. Ongoing research programs sponsored by EPA and Federal land managing agencies, as well as industry, are collecting and evaluating data in an effort to better define specific techniques for visibility monitoring. The Agency's Office of Research and Development now has a program underway which would further evaluate methodologies for visibility monitoring with the objective of providing definitive method descriptions in up-dated versions of the interim guidance. These revisions would be released as new information becomes available and the evaluation progresses. This progress would eventually lead to a standardized method (or methods) for visibility monitoring.

A large number of the comments received on the interim guidance criticized the broad terms used to define visibility. Commenters described the definition as "vague" and "subjective."

EPA believes with our present knowledge of visibility a definition such as this cannot be strictly quantitative.

One commenter suggested that the definition of visibility as contained in Webster's dictionary be adopted. EPA agrees that the initial phrase of this definition "the degree or extent to which something is visible" is an appropriate one to describe visibility and it has been included in the document's definition. However, this commenter infers this definition relates to or includes that of visual range. This definition should not be a surrogate or substitute for visual range. EPA recognizes that the appropriate electro-optical parameters that characterize the perception of visual air quality should be measured or monitored, but this should not eliminate the use of visual range in describing visibility. Visual range is one indicator of atmospheric clarity, and because of its historical popularity remains a useful concept for the lay person.

Another major criticism of the interim guidance involved the apparent lack of guidance for using human observers to rate or characterize the perception of visual air quality. EPA recognizes the importance of relating human perception of visual air quality to measured electro-optical parameters. However, specific guidance on this subject is beyond the scope of the interim guideline. Ongoing research programs are addressing this problem and evaluating methodologies for establishing a human-observer-based visibility index.

One commenter stated that EPA's proposed visibility program missed the essential point of visibility protection - the preservation of the public's enjoyment of the Class I Federal areas described in the Act. It was suggested that a quantitative estimate of scenic beauty be used to determine what value the public places on a Class I Federal area. Therefore, evaluation of the Class I Federal area would be in terms of public enjoyment rather than visual air quality.

EPA contends that "public enjoyment" is a socio-economic phenomenom that varies according to a person's demographic background, level of affluence, state of mind, etc., and an evaluation of this nature cannot, from our present regulatory viewpoint, be based solely on a measure of scenic beauty. Scenic beauty may play an important part in this evaluation, but it is certainly not a substitute.

The same commenter felt that appropriate guidance should be included in the interim guidance for determining vista and sky color. Research in this area has not progressed to the point that one method is clearly better for characterizing atmospheric discoloration. Thus, any guidance in this area is inappropriate at this time.

Another issue commented on frequently concerned the apparent lack of focus on Phase I visibility impairment, i.e., visible plumes. Commenters felt the interim guidance only discussed visibility monitoring as it related to regional haze. Section 4 of the document discusses the special case of monitoring visible plumes.

Several commenters suggested that the physical limitations of existing mathematical formulisms, such as those of the Kaschmeider relationship, and 0.02 as the contrast threshold, should be more thoroughly discussed. It is simply not practical to include as part of the interim guidance all the background information available on the physical and mathematical formulas and theories which apply to visibility. Limitations in mathematical formulisms and monitoring techniques, along with any errors incurred by their use are discussed in a number of technical reports. References are included for those readers interested in obtaining this background information.

Several commenters stated that the interim guidance is "prejudicial toward use of telephetometers for measuring contrast." Others felt the interim guidance recommended only the telephetometer as an instrument to measure visibility. While a two-point multi-wavelength telephetometer was the recommended instrument for determining contrast, the telephetometer was not the only instrument evaluated and discussed. To the contrary, a number of instruments, which tend to complement each other, are recommended. Specifically, nephelometers, cameras equipped with color slide film, fine particulate monitors, and meteorological instruments are discussed as devices which make up a complete visibility monitoring program. Federal or State agencies or industrial clients who anticipate the need for a visibility monitoring program should evaluate each of these techniques, and choose those devices best suited to their specific monitoring objectives.

There was some discussion on the use of photographs as a tool in visibility monitoring. One commenter felt photography should be used more quantitatively since it is conducive to excellent quality control, and the results obtained were comparable to those of a telephetometer. Research has shown that comparable results are not always obtained with photographs. An error of at least 10 percent in measured contrast has occurred when using photographic techniques. Therefore, EPA recommends that photography be used for establishing a qualitative data base, while electro-optical instruments should be used for quantitative measurements.

Other comments concerning photography as a method by which to evaluate visibility dealt with the frequency with which photographs should be taken. EPA has found that photographs taken three times a day of the selected vista is sufficient for most monitoring purposes. However, the data can be supplemented by more photographs, if the particular situation warrants it. However, the Agency does believe that the suggested method is more efficient and will not compromise the quality of the results.

Many comments were received concerning the limitations of measuring surface meteorological conditions and using this data when evaluating visibility. EPA agrees there are restrictions on the use of such data. Surface meteorology should only be used in conjunction with required data and in special case studies. Conventional meteorological measurements should, when possible, be supplemented by measurements of mixing depths, wind directions and speed along the sight path, as well as vertical profiles. The interim guidance has been amended to reflect this information.

Comments were received on the potential use of airplanes equipped with monitoring instruments as devices for establishing whether plumes were impacting a Federal Class I area. One commenter felt this method was too "exotic" to be useful in determining "reasonable attribution." There are several situations which could occur where a plume could impact a Class I Federal area, but the origin of the plume could not immediately be seen. EPA believes that tracing the plume in this manner to determine its origin is not "exotic" and is, in fact, entirely appropriate.

It was suggested that the interim guidance did not adequately discuss the volume scattering function. The document has been amended to better describe this term. Other commenters felt that measured parameters should relate directly to what an observer perceives as well as sees. EPA agrees and the document has been amended to reflect this attitude.

A specific comment received stated "${}_tN_r$ is not the sum of attenuated inherent radiance and energy scattered by the intervening atmosphere." The equation is this:

$${}_tN_r = N_r{}^* + {}_tN_oT$$

${}_tN_o$ is the inherent target radiance that is attenuated by the intervening atmosphere by a fraction T while $N_r{}^*$ is the result of atmospheric scattering between the observer and target (See: Reference No. 6 in the interim guidance). There are no other contributions. For simplicity, units were not specifically mentioned and are not necessary for the relative calculations used in the document (See reference list in the interim guidance for more information and detailed discussions).

A large majority of commenters discussed the limitations associated with particulate sampling. Since these comments tended to be very specific, a comment/response format seemed the most appropriate way to address these comments or concerns.

Comment: A sulfate/nitrate artifact problem might contribute erroneously to apparent particle concentration.

Response: The production of particles on sample substrates from gaseous pollutants (artifact sulfates/nitrates) can be a problem. Artifact production is related to factors such as the nature of the sample substrate and the concentrations of the precursor gaseous pollutants. In most of the visibility protected areas the levels of SO_2 and NO_x are very low suggesting no serious artifact problems. There are protected areas with high concentrations of these gases. For these situations additional precautions in the choice of treatment of sampling substrates must be exercised. The interim guidance document was not written at a level of detail which would allow discussion of this problem. References which discuss establishment of an inhalable particulate network are included in the document.

Comment: There can be an interpretation problem caused by occasional capture of large particles on the small particle receptor area (fine particle stage) of a particle sampler.

Response: Large particles erroneously captured on the fine particle stage can be minimized by various operational procedures for most size segregating samplers. Again this level of information is beyond the intended scope of the interim guidance document. A reference which discusses fine particulate network is included in the document.

Comment: It is unlikely that particle data can be of use in visibility phenomena because particle sampling is performed at a point in space while visibility is an integrated measure over the entire optical path.

Response: In most situations there will be a sufficient number of cases where the point measurement (particle sample) will be representative of the long path array of particles such that a meaningful relationship can be developed. A large degree of nonhomogeneity would complicate or perhaps defeat this scheme. However, a comparison of telephotometer (long path) and nephelometer (point) data would be one method to identify such situations and avoid mistaken assumptions. Particle sampling is important in trying to establish the composition, etc., of the visibility impairment. This in no way implies that particulate data can be related to a visibility impairment in every case.

Comment: It is virtually impossible to identify specific sources of particles by chemical and morphological analysis.

Response: While it is not always possible to identify the relative contributions of specific sources to the particle loading, it is often possible to distinguish various source types. For example, windblown dust is quite distinctive physically and chemically from automotive emissions. Other distinctive categories include vegetative burning, smelting, fossil fuel buring facilities and sea salt. If a source category is identified the specific source can sometimes be inferred by other available data or by conducting specially designed additional field research.

Comment: The guidelines do not include adequate information on the monitoring for chemical speciation and size distribution of all relevant pollutants.

Response: Specific details of a particle monitoring effort should be designed for each program. Factors such as the expected nature, persistence and concentrations of the pollutants of interest must be balanced against practical considerations of logistics and budget. The guidance document was not designed to provide the level of detailed information necessary to replace program specific monitoring design.

Comment: Paragraph 2 on Page 21 of the monitoring guidance summarizes particle sampling and analysis techniques but does not specify which to use.

Response: Somewhat more specific guidance is provided on pages 37 and 39. Detailed guidance is beyond the scope of the interim guidance document. Program specific particle monitoring and analysis design is recommended.

4.9.4 Best Available Retrofit Technology

PART I

Numerous comments were received which discussed the lack of guidance on weighing the costs and benefits of visibility control. The commenters felt that specific guidance beyond that included in the BART guideline was needed to weigh each relevant factor and, specifically, to compare the anticipated improvement in visibility with the cost of controlling emissions for that level of improvement. At the same time, however, many of these same commenters argued that States should have greater discretion under the regulations in making BART determinations.

It is, of course, not possible to provide more specific guidance on how a State should balance the various BART factors while simultaneously giving the State more flexibility to strike the balance as it deems appropriate in light of local and site-specific considerations. A strictly quantitative approach, however, is not necessarily the better alternative. The procedures outlined in Part 1 allow States to consider local conditions and circumstances in their BART decisionmaking. This recognizes States have the most complete knowledge of local factors which would affect the BART decision, and retains State discretion to consider the factors in a case-by-case manner as was intended by § 169A. The inappropriateness of EPA making these decisions for the States is underscored by the fact that the empirical techniques (as opposed to models) recommended in the BART guideline do not yield the precise quantitative results that would be helpful in making uniform judgments for all sources on how the BART factors should be weighed.

Several commenters felt the comparison photographic technique as discussed in Part 1 was vague and subjective, and as such would not be useful in assessing the improvement in visibility obtained by retrofitting controls.

The comparison photographic technique is an empirical method by which relative improvement in visibility may be assessed. There are obviously limitations in the use of the described method. But, when applied with common sense engineering judgment, we feel this technique can provide useful information in evaluating the effect of retrofit controls on improvements in visibility. If the State is uncomfortable with the results of the method, or a compatible source cannot be located, other techniques and information should be explored. The State can then assess the comparison technique in the context of all other available information and make a decision as to whether sufficiently reliable information exists to reasonably estimate the amount of improvement that would result from a given level of control.

A few commenters suggested that the techniques described in the BART guideline for fossil fuel fired power plants with a generating capacity in excess of 750 megawatts are not transferable to other existing major facilities, and that the Agency should provide specific guidance on sources other than power plants.

The Agency feels the design of the BART guideline, especially Part 1, is general enough to be useful to sources other than power plants. Although some of the information is power plant specific, the procedures outlined therein (See: Figures 1 and 2) may be applied to any source undergoing a BART analysis. Part II discusses more specifically retrofit alternatives for power plants, but it too can provide information useful to analyses of other sources. For example, the techniques for evaluating the cost of a retrofit alternative for a power plant may prove valuable when estimating retrofit costs of other sources. Finally, the conference report makes clear that EPA was to promulgate specific BART guidelines only for large power plants, and allow the State greater discretion in determining BART for other existing stationary facilities.

On July 23, 1980, EPA announced the availability of the revised BART guidelines. In these guidelines EPA said, for the first time, that "BART for the majority of power plants under consideration is the NSPS," and that a State would have to provide a "detailed justification" for any departure from NSPS level of control in setting BART.

Commenters complained vigorously that 1) the NSPS is for new sources, and EPA did not develop information on retrofitting technology during the NSPS rulemaking; 2) BART by statute must balance costs against remaining useful life, degree of improvement, etc., and that the presumption violates this, 3) retrofit costs are higher than the costs of installing controls during construction of a new plant, 4) it was unclear what sort of "detailed justification" would overcome the presumption, and 5) by failing to state any basis for the presumption, EPA violated § 307(d) and precluded meaningful comment.

The final rule and guidelines, in response to the comments received, contain no presumption that BART for large power plants is the NSPS level of control. Instead, the guidelines state merely that the controls needed to meet NSPS limits for power plants (40 C.F.R. Part 60, Subpart Da) are reasonably available to these sources. If this would represent more control than is required as BART in a given case, EPA could not disapprove the plan on that basis since under Section 116 of the Act a State is free to adopt controls more stringent than those EPA requires as a minimum.

If, on the other hand, a State sets as BART an emission limitation less stringent than the NSPS level of control, it must explain in detail how it weighed the various BART factors, and why the emission limit chosen is more appropriate than that represented by the NSPS level of control. In this way, the NSPS level of control serves not as a presumption for BART, but merely as a basis for comparison that the State should use in weighing, on a site-specific basis, the various BART factors. As discussed in Part II of both the proposed and final BART guideline, retrofit controls that would allow a large power plant to meet the NSPS level of control are, on an industry-wide basis, technologically feasible and can be installed, as a general matter, at a cost about 15 percent higher than the cost of installing the controls during construction of a new source.

Part I of the proposed BART guideline stated that, in determining BART under Phase I of the visibility protection program, the State should consider what controls might be imposed in future phases since "[i]t may be more feasible for the source to control a 'future phase' visibility impairment in conjunction with its Phase I requirements than to wait until the impairment is formally regulated."

Several commenters complained that this statement contradicted the main basis for EPA's phased approach, which is that at present it is not possible to attribute Phase II impairments to a source or determine the appropriate controls needed to correct such impairments.

In its proposal, EPA was concerned that controls installed for particulates in Phase I of the visibility protection program could be incompatible with controls required to improve SO_2-caused visibility impairment in a later phase of the program. Therefore, EPA urged the State to decide whether long-run efficiency and cost-savings would result by designing BART for Phase I to be compatible with the control that might be required in Phase II.

EPA continues to believe that control for particulate emissions installed without consideration of the future need to control SO_2 emissions could result in particulate controls that would be incompatible with necessary SO_2 controls. EPA also recognizes, however, that it is at present difficult to attribute SO_2-caused impairment to a source and determine the degree of control necessary to improve such impairment. Accordingly, EPA has not required a State to impose in Phase I any SO_2 controls as BART simply because such controls may be required by a later phase.

The question remains under this phased approach as to whether the environment or regulated industry should bear the risk that a future phase may require additional (e.g., SO_2) control. The phased approach significantly defers the obligation Congress imposed on these major existing facilities that impair visibility in mandatory Class I Federal areas and EPA at present believes that these sources, since they enjoy the benefit of delay that this phased approach brings them, should also bear any risk involved in that approach. Therefore, the BART guideline states that, at present, EPA would not consider incompatible particulate controls installed under Phase I requirements as justification for not requiring SO_2 controls under Phase II. This issue will, however, be resolved in the public rulemaking that will accompany Phase II of the visibility protection program, and EPA will not make a final decision until it promulgates those regulations. EPA is announcing its tentative position now, however, in order to give States and sources advance notice of EPA's current views so they can plan accordingly.

PART II

Comments on the technical aspects of the guidelines were received both prior to proposal through NAPCTAC and after proposal of the guidelines through a public comment period. All of these comments were taken into account in promulgating the guidance specified for fossil fuel fired power plants as required by Section 169A.

The comments received on the guidelines presentation of the state of the art for retrofit NO_x control contend that the document fails to stress that adverse side effects of combustion modification may limit attainment of maximum NO_x control. Other comments were that the theory of NO_x formation was not well explained, and not enough emphasis was placed on the fact that it might not be possible to limit NO_x emissions from existing steam generators to the same NO_x limits that are achievable for new steam generators. Although EPA believes these aspects are adequately addressed, the guidelines have been revised to allow State agencies to take the foregoing comments into account in making decisions on the best available retrofit technology for NO_x control.

It was suggested that the conclusions reached on the lowest level of NO_x emissions that are achievable by combustion modification were insufficiently supported in the document. Repeating the basis for this conclusion is not necessary since the data presented in the background information document for the new source performance standards promulgated June 11, 1979 is the data used in this guideline.

The thrust of comments from the power industry on the cost of NO_x control are that: 1) the cost estimates are inaccurate, and 2) the guidelines fail to take into account the cost of derating for NO_x control.

No data, however, were presented by the power industry indicating whether the cost estimates were too high or too low. If information had been provided for those power plants where the modifications described in the document have been implemented, the EPA would have been willing to consider changing the cost estimates. In the absence of such information the EPA decided to rely on the cost estimates of the document that were derived after consultation with the four major power plant steam generator manufacturers. (A related comment was that the guidelines for cost estimates should advise State agencies to consult steam generator manufacturers and other combustion modification experts on cost estimates. The guidelines have been revised to recommend such action.)

In Section 2 of the document derating is characterized as an undesirable NO_x control technique. In response to comments, additional discussion of the potential cost of derating has been added to Section 4. As discussed in Section 4, it was not possible to provide guidelines for exact determination of the cost of derating. However, all of the primary cost elements are identified for State agencies to take into account should derating be considered.

The guidelines were criticized for being too simplistic in specifying the size of ESP systems for various sulfur content coals. The guidelines are intended to provide a basis for best available retrofit technology decisions and are not intended to be guidelines on how to accurately size an ESP system. The EPA agrees with the comments that coal sulfur content is not the only factor to be considered in sizing an ESP system or in choosing between a hot side or a cold side ESP system. However, if the size and the cost guidelines given are used, an ESP system can be installed that will limit particulate emissions to a level less than 0.03 pounds per million Btu for the capital and annual costs estimated for the coal sulfur contents given in the guidelines. This is because the size criteria of the document are for the most difficult cases corresponding to coal sulfur content. The guidelines have been revised to recommend advice from ESP vendors to determine if smaller sized ESP systems might achieve the 0.03 pound per million Btu particulate control level.

Other comments alleged that the ESP cost estimates are inaccurate and unsupported. The basis for the ESP cost estimates is clearly stated and referenced. The cost estimates are derived from those used in support of the new source performance standards promulgated June 11, 1979. A fifteen percent allowance has been added for the additional cost of ductwork for a retrofit ESP system as compared with a new system. This fifteen percent allowance was derived from analysis of ductwork cost estimates provided by Pullman Kellogg Division of Pullman Incorporated. None of the comments included data on the actual costs of retrofit ESP systems. Consequently, the cost estimates were not revised.

It was suggested that ESP pressure drop should be 3 inches of water rather than 1/2 inch of water. After reconsideration of the engineering aspects the EPA agrees that the 3 inch value should be used. The guidelines have been revised accordingly and the cost estimates are conservative enough to provide for this change.

The prime comments on baghouses dealt with pressure drop and cost estimates. Commenters felt pressure drop estimates should be increased and that the cost estimates were inaccurate. Again, no data were submitted to indicate if the cost estimates were too high or too low, consequently, no changes were made to the cost estimates. Based on comments and analysis of data on power plant baghouses, the estimated pressure drop across baghouses was increased from 5 inches to 10 inches of water. Review of the cost estimates showed that the cost estimates were conservative enough to accommodate this change.

One comment was received suggesting that the size of baghouses required might be reduced by electrostatically charging the particulates. EPA concluded that the technique is not adequately demonstrated for power plant applications. However, this technique is mentioned but not recommended in the guidelines for State agencies that might want to consider this innovation.

There were comments that the guidelines were incorrectly limited to lime and limestone scrubbing of low sulfur coals. Consequently, the guidelines were revised to permit cost estimates for a wide variety of SO_2 control systems and coal sulfur contents. After this revision there were comments that the guidelines did not guide State agencies on which SO_2 control process should be selected. No changes were made regarding this latter comment since, as pointed out in several other comments, the factors that influence the choice of a SO_2 control system are site specific. Consequently, no specific guidance can be given for this selection.

Regarding comments that the guidelines should provide for spare systems components, review of the basis for the cost estimates showed that provision had been made for spare key components of the systems. Consequently, no changes were made.

There were several comments questioning the reliability of other SO_2 control systems and effectiveness of the SO_2 control systems. The EPA position on the effectiveness and reliability of SO_2 control systems is given in Appendices D and E of the guidelines.

There were comments that dry scrubbing SO_2 control systems are not demonstrated on full scale power plant applications. This agrees with the EPA position on the state of demonstration of dry scrubbing systems. Consequently, no guideline changes were made.

Some comments were received that stated a particulate removal system such as a venturi scrubber is not necessary ahead of a lime or limestone scrubbing system. Although the cost estimates provide for such systems the guidelines do not require particulate precleaning in conjunction with SO_2 control.

There were several comments about sludge disposal. Some commenters pointed out that 70 percent sludge solids content cannot be achieved in all cases. The document has been revised to permit estimates of sludge generation at both the 50 percent and 70 percent sludge solid content levels. The viability of a 50 foot depth for sludge disposal sites was also questioned. The EPA agrees that a 50 foot depth may not always be possible. Guidelines are provided for estimating land area requirements for a variety of pond depths.

Several commenters noted that the guideline did not take into account certain site specific cost factors including 1) facility relocations, 2) stack modifications, 3) sludge handling, and 4) downtime. The Agency recognizes that these and other such cost factors can have a significant effect on the cost of installing and operating retrofit control equipment. However, these costs are extremely site specific for existing stationary facilities and must be addressed on an individual basis and may be cause for choosing one BART alternative over another.

In response to comments that the guidelines did not include cost estimates for stacks the guidelines have been revised to include such cost estimates. However, the EPA was unable to provide any guidelines on how to determine when a retrofit system with a new stack would be a less costly alternative than a retrofit system using the existing stack. This is because this kind of determination requires detailed site specific engineering studies. Consequently, no generalizations can be made.

The guidelines have been revised to advise State agencies that water supply may be a problem especially in arid Western areas. Cooling tower blowdown is suggested as a possible water source.

4.9.5 Criteria for the Identification of Integral Vistas

Several comments were provided which expressed concern over the "Criteria for the Identification of Integral Vistas." Some of the commenters believed that the guideline did not provide precise, objective and reproducible guidelines for identifying integral vistas. These commenters went on to point out that the procedures for identifying the vistas (1) were not clear, (2) failed to require that a docket or some other type of documentation be prepared to support any identification of an integral vista, (3) failed to indicate how certain factors should be considered or weighted when decisions are made, and (4) used many undefined or nebulous terms which make it very subjective.

Comments were also received which indicated that while some of the concepts and ideas in the guideline for identifying integral vistas had merit, the guideline itself should not be published as an EPA document. While it was acknowledged that EPA's regulations should provide the basis and definition for the integral vista concept, once a definition is adopted it must be directed to the FLM for implementation. Therefore, the FLM should take the lead for the development of the criteria and procedures for identification of integral vistas.

The Agency realizes that in some cases the criteria identified in the guideline for identification of integral vistas does need some improvement and further explanation and that this can best be handled by the FLM utilizing their knowledge and experience in the administration of lands within their jurisdiction. Thus, the Agency will not formally issue the "Criteria on the Identification of Integral Vistas." This criteria will be developed and published by the FLM. In response to comments, the final regulations require the FLM to give notice and a reasonable opportunity for comment on the criteria for identification prior to its adoption by the FLM. The Agency believes that the FLMs have the necessary knowledge and experience with regard to the lands within their jurisdiction to develop criteria that will ensure consideration of all factors in a reasonable and definitive manner.

4.10 NEW SOURCE

EPA's PSD regulations require that a proposed new major source or major modification evaluate its potential affect on visibility and, if the State is satisfied an adverse impact on the visibility value of a Federal Class I area would result, that the State deny the PSD permit. In response to comments on the Advance Notice of Proposed Rulemaking, EPA in Section 51.307 of its proposal sought to clarify and expand, in a limited fashion, the requirements a State must meet in reviewing under the PSD program the affects of a new source on visibility in a Federal Class I area.

EPA received comments on its proposal that visibility issues concerning new PSD sources must be handled under the procedures for PSD, and that if a source's impact on visibility is considered in review of its PSD permit application that is subsequently granted, the source cannot later be subjected to the requirements of Section 169A. EPA agrees with both of these points as discussed below.

As EPA recognized in the statement accompanying its proposal, there are several references in the legislative history to Congress' concern that visibility issues concerning new PSD sources must be handled under the procedures for PSD. See 45 Federal Register 34778. The Conference Report states: "Issues with respect to visibility as an air quality value in application to new sources are to be resolved within the procedures for prevention of significant deterioration." H. Rep. No. 95-564, 95th Cong. Rec. S 13709 (daily ed. August 4, 1977) (Statement of Senator Muskie). In a statement accompanying technical amendments to the Act, Representative Rogers explained the conferees' intent in including the above provision:

> The conference committee, of course, did not want to subject new sources to two separate procedural steps under the PSD and visibility provisions. . . . But in the one-stop permit process for new and modified major sources, the substantive criteria and standards of both the PSD and visibility provisions would have to be met. 123 Cong. Rec. H 11958 (Nov. 1, 1977).

Thus the provisions proposed and promulgated in § 51.307 for new sources are to be implemented within a State's PSD procedures. The reason these provisions are contained in § 51.307, rather than in § 51.24 with most of the other PSD procedures, is to avoid interference with the State's ongoing efforts to adopt approvable PSD regulations in response to EPA's August 7, 1980, final rules for PSD and so-called "nonattainment area" programs. 45 Federal Register 52676. Promulgation of the provisions of § 51.307 as amendments to § 51.24 would, in EPA's judgment, unnecessarily confuse the issue of what changes the States must make to their PSD regulations and when. The changes required by this visibility rulemaking must be made within nine months of the publication date of the visibility regulations, while the changes to a State's SIP required by the August 7, 1980, promulgation must be made within nine months of that date. EPA believes Congress desired that States adopt the PSD program as soon as possible, and that any timing or organization of regulations under Subpart C of the Act that would hinder State adoption of the PSD program would be inconsistent with that intent of Congress. Thus, although, as noted, the provisions regarding review of the affect of new sources on visibility in Federal Class I areas promulgated in this visibility rulemaking are to be codified initially under a different section of title 40, part 51 of the Code of Federal Regulation, these provisions nonetheless require such review only within the PSD procedures.[15]

Specifically, Section 51.307 establishes certain requirements concerning integral vistas discussed elsewhere in this statement. In addition, this section provides time periods during which 1) the State must notify the Federal Land Manager of a permit application from a proposed new major source that may affect visibility in a Federal Class I area, 2) the Federal Land Manager may seek to demonstrate to the State that an adverse impact on visibility would result in such area, and 3) the State must give reasons why it was not satisfied with the State's demonstration.

The issue regarding reconsideration under § 169A of a source granted a PSD permit under § 165 was addressed in this colloquy regarding the Conference Report:

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[15] One commenter raised the specter of a source being subject to two visibility reviews--one by EPA and one by the State--that would result if a State adopted a visibility protection plan before it took over from EPA the PSD program. Based on its extensive experience with State plan revisions, EPA believes the likelihood of such an occurrence is remote to the point of being virtually nonexistent. As noted above, a State must develop its PSD program many months before it must develop its visibility protection program. In addition, the States have had more experience with the PSD program than the visibility protection program.

> Mr. McClure. Once a [permit] . . . has been granted to a new source and the question of visibility has been considered as a part of the air quality values under the significant deterioration provisions, could the source be subjected later to the requirement of Section [169A]?
>
> Mr. Muskie. It is my understanding that was not the intent of the conferees.
>
> 123 Cong. Rec. S 13709 (daily ed., August 4, 1977).

Therefore, after a source has received a PSD permit and the question of the source's potential affect on visibility in any Federal Class I area has been considered, the source may not later be subjected to requirements under § 169A. EPA notes that its PSD regulations preceded the 1977 Clean Air Act Amendments did not require analysis of visibility impacts, and therefore any source granted a PSD permit under those pre-Amendment regulations is subject to the requirements of the long-term strategy. A State could, of course, impose under authority of § 116 any requirements on any source, including a source that has a PSD permit, in order to assure reasonable progress toward the national visibility goal. In any event the State plan must be adequate to assure reasonable progress toward the national visibility goal.

EPA's proposal would require a State to review all new major sources for their affects on visibility in any area promulgated under Section 169A(a)(2). In the preamble EPA explained that this requirement was necessary because there are sources which are not subject to the PSD regulations. Because of the decision in Alabama Power Co. v. Costle, —— F.2d —— (No. 78-1006 12/14/79), the PSD regulation did not call for the review of a new major source locating in a "nonattainment" area, even if it would impair visibility in a § 169A(a)(2) area. In the statement accompanying the proposal EPA explained at length the authority for applying the long-term strategy to new, as well as existing, sources. See 45 Federal Register 34777-8.

Commenters did not focus on the specific issue of whether EPA could cover new major sources locating in nonattainment areas, but several did argue that EPA had no authority to require anything of new sources under § 169A. These commenters did not, however, present any arguments not discussed by EPA in its proposal (see 45 Federal Register 34777-8) or discussed above in connection with PSD review procedures. The short answer to those who see no authority in § 169A to control new sources is that they ignore the major part of the national goal that calls for the prevention of new impairment. It would have been nonsensical for Congress to create a visibility program that attacks the problem by controlling older sources while allowing new sources simultaneously to create the problem anew. As the House Committee wrote in its discussion of § 169A, "the very difficulty of curing existing problems after the fact argues strongly for a strong preventive approach for the future" H. Rep. No. 95-294, supra, at 206.

Section 51.307 of the final regulations would require (in addition to the review already required by the PSD regulations) that any new major source that locates in a nonattainment area must be reviewed for its affect on visibility impairment. This review for such sources would, however, only be for the source's affect on a mandatory Class I Federal area listed under § 169A(a)(2). Under 40 CFR 51.24, a PSD source would be reviewed for its affect on any Federal Class I area, as § 165(d)(2) requires. As a factual matter, review of such sources locating in a nonattainment area is important and often critical to making reasonable progress toward the national visibility goal. For example, in many cases the § 169A(a)(2) areas lie close to nonattainment areas. Without the requirement in § 51.307 of the final regulations, a major new source could locate in the nonattainment area and escape review of its affect on visibility in the § 169A(a)(2) area, even though that affect could be significant.

The authority for the review required by § 51.307 of the final regulations stems from § 169A which, as explained above, calls for reasonable progress toward preventing any future impairment, and § 161 which authorizes EPA to adopt under "this part" any "measures as may be necessary . . . to prevent significant deterioration." As noted, "this part" means Part C of the Act, which includes § 169A, and "prevention of significant deterioration" clearly contemplates protection of visibility, as shown by § 160 and 165. Indeed, the United States Court of Appeals for the District of Columbia has specifically contemplated the use of such authority to protect visibility. In Alabama Power Company v. Costle, supra at 13 ERC 58, the court, in concluding that the PSD permit requirements do not, on the basis of § 165, extend to a source locating in a nonattainment area, stated:

> Section 169A is available to protect visibility in Class I areas where visibility is an important characteristic, and the Administrator may choose to invoke the rulemaking authority granted to him by section 161 to address this problem.

Since the authority to review the visibility effects of these new major sources to be located in nonattainment areas comes in part from § 169A, not § 165(d), any negative effects on visibility these sources would cause should be understood within the long-term strategy to make "reasonable progress" toward the national visibility goal that § 169A requires. "Reasonable progress" allows the consideration of cost, energy, and other relevant factors.

4.11 COST VERSUS BENEFIT

Many comments were received regarding the overall economic impact of the proposed visibility regulations as compared to the benefits to be derived. Many of the comments indicated that virtually no benefit analysis had been conducted and that since visibility was an aesthetic value economics and energy concerns should be considered.

Section 169A(a)(1) sets out the basic objective of the visibility program:

> Congress hereby declares as a national goal the prevention of any future and the remedying of any existing, impairment of visibility in mandatory Class I Federal areas which impairment results from manmade air pollution.

While visibility is an aesthetic value which is reversible, Congress added the visibility program to the Act because it was concerned with impairment of scenic vistas that are enjoyed by many people and the economic harm that would befall localities dependent on revenues from these people if they were to stop visting these areas because of impaired visibility or degraded vistas. As the House Report explained:

> Certain areas of the United States depend upon their intrinsic beauty and historical and archeological treasures as a means of promoting their economic viability.[16]

Congress was aware of the potential costs associated with the visibility program it mandated, and included several provisions to minimize the costs of the program, as the House Committee explained on pages 206-207 of its Report. EPA's final visibility regulations fully implement these provisions to minimize cost, and EPA has no discretion simply to ignore Congress' mandate because of some general speculation regarding a comparison of the costs versus the benefits of the program. Moreover, EPA's phased approach further minimizes the potential cost of the program in recognition of scientific and technical limitations. EPA is now in the process of developing guidance on assessing the benefits of good visibility. A "Visibility Benefits Workbook" will be made available for public review and comment when it is available.

Several comments were also presented regarding the consideration of cost in making the reasonable attribution demonstration for identifying sources which would be subject to BART.

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[16] HR Rep. No. 95-294, 95th Congress, 1st Sess. 203.04 (1977).

A few comments indicated that EPA had completely ignored the cost-benefit analysis for BART. EPA believes that the determination of whether a source impairs visibility is clearly independent of the cost to the source of remedying any impairment it causes. Once a source is determined to cause the impairment of visibility, cost and other nonair quality considerations can and are taken into consideration in determining the level of control which represents BART, as the BART guidelines provide.

The rest of this section responds to the twenty-two comments on the "Preliminary Assessment of Economic Impact of Visibility Regulations" EPA released with its proposal. This document has been revised in response to comments and changes in the final regulations.

The shortcomings of the analysis attributed to the use of screening curves were pointed out in 14 of the 22 comments. The chief concern centered around the use of curves derived from an unvalidated model. Specific objections were made to the use of simplifying assumptions to derive the curves, such as:

- A "representative" 1,000 Mw powerplant,
- Uniform terrain,
- Worst case meteorology,
- Fixed observer-plume-sun geometry,
- Site-insensitive chemical transport estimates,
- Negligible impairment impact for certain chemical reactions, and
- Gaussian plume dispersion modeling (appropriate for short transport distances) for all distances.

Four respondents objected to the preliminary assessment's application of screening curves intended for distances of up to 100 km to plants located beyond that distance. One comment labeled the use of the same screening curves for eastern and western sites as inappropriate, given the influence of climate and terrain on the screening results.

ERT, which developed the screening curves, objected to the use of the curves for identifying specific sources. ERT claimed that the curves were intended to be used only as a means to estimate generically the numbers and types of industrial sources having potential visibility impact.

EPA agrees that the screening curves have shortcomings, but these limitations of the screening curves were and will continue to be recognized. For example, ERT contends that the curves were not meant for identifying single sources for mandatory BART retrofits. They were not so used. The curves were only used to establish a universe of sources potentially affected by visibility regulations. That universe is identified for EPA as part of the documentation of the methodology, assumption, and results of the analysis. At no time does the preliminary assessment allege that the analysis or the ERT screening curves portray a precise indication of the true visibility impacts at specific facilities. As noted in the preliminary assessment, EPA believes that such a determination can only be made on a site-specific basis using analytical and modeling tools deemed appropriate by the facility in question.

In essence, the analysis in the preliminary assessment was never intended to be site specific. The only reason for including the names of individual sources was to provide an opportunity for the findings to be carefully reviewed by the interested parties.

EPA attempted to minimize the problems associated with using the curves as the sole screening device by using other criteria as well. No undue importance was placed on the results of either screening method. The assessment emphasizes rather than ignores the need for site-specific analysis prior to establishing a final list of sources requiring controls for visibility protection.

The one comment concerning the use of "the same screening curves for eastern and western sites" overlooks the fact that different curves were used to screen the sources located in different regions. The screening curves used assume different wind velocity and direction, mixing height, relative humidity, and visual range constraints for each of nine regions.

Several respondents asserted that the results of the analysis were rendered useless by the reliance on inappropriate assumptions. A summary of the comments made on each assumption is presented along with a response.

Comment: Eight comments cited the National Emissions Data System (NEDS) as a poor data source, notorious for being inaccurate, incomplete, and out of date. One commenter blamed specific incorrect NEDS entries for the preliminary assessment's overstatement of visibility impacts caused by the Bullock and Hayden plants.

Other comments voiced concern that screening from the base of sources included in NEDS underestimated the number of sources potentially affected. NERA, the American Paper Institute, and the National Forest Products Association pointed out that sources whose emissions are not reported in NEDS, because they commenced operation after the data were initially collected, were not included in the preliminary assessment. Other sources whose process emissions are compounded by fugitive emissions were also missed by the assessment. Since the regulations will apply to all sources with the potential to emit up to 250 tons per year, the American Petroleum Institute feels that screening based on actual emissions underestimates the number of sources likely to be affected. (UARG feels that the inclusion of only powerplants in the analysis is evidence that not all potential sources have been considered.)

Response: The NEDS data base was used because the data contained therein (source inventories by category, estimated annual emissions, calculated distances to Class I areas) made it a reasonable choice for a preliminary analysis. Chapter 6 of the assessment presents a thorough evaluation of the NEDS data and its shortcomings, and notes the uncertainties in the analysis arising from its use. The conclusion after extensive checking of individual entries is similar to that expressed in the comments; i.e., that an analysis based on possible overstatements of emissions will possibly result in an overestimate of the number of sources likely to be affected by the visibility regulations. This conservative bias was intentional.

Further, for all the final sources selected as potentially being impacted by visibility regulations (which turned out to include only utility powerplants), estimates of current emissions from each utility's latest submissions to the Federal Energy Regulatory Commission (FERC Form 67) was specifically obtained. This was done explicitly because of concerns regarding the currency and accuracy of the NEDS data. In some cases this was further augmented by discussions with utility officials. When utility emissions reported on FERC Form 67 differed from those calculated using AP-42 formulas on the FERC Form 67 fuel data, the calculated estimates were used. This may explain why the Colorado-Ute estimates of NO_x emissions are different at the Hayden powerplant.

Omissions from the NEDS data base resulting in an understatement of the possible impacts of any regulation can occur. However, evaluation of successive NEDS printouts indicated that additions of new sources of emissions were generally included in the data base, such that some effort had been made to update the NEDS. Unfortunately, the NEDS data base is the only source readily available which provides the type of data necessary to perform the analysis described in the assessment report. Whatever the omissions from the NEDS data, the relative impacts and the conclusions of the preliminary analysis would not likely change. The analysis performed was to provide an initial indication of the likely impacts of the visibility regulations. The analysis was not to provide a complete and accurate assessment of all sources which eventually could be affected by the visibility regulations.

The fact that only utility powerplants were identified should not necessarily be construed as an indication that all sources have not been identified. Many of the industrial sources were exempted from consideration because of specific provisions in the Clean Air Act. According to the legislative record, these provisions were explicitly provided to focus the BART regulations on a few large powerplants, especially those in the West. Hence, it is not surprising that when the exemptions were applied to large industrial and utility sources, only utility powerplants remained identified in the analysis as potentially being affected by the BART regulations.

Comment: Both sources of equipment cost estimates used in the analysis were criticized by Salt River Project (SRP). Cost estimates prepared by Pullman Kellogg have only been issued in a draft report and hence are subject to change before the final report is published. SRP feels that only final estimates are acceptable input for an analysis to support rulemaking. Furthermore, SRP doubts that costs used in an NSPS evaluation (i.e., for new sources) are appropriate for retrofitting controls to existing equipment. (See additional discussion of cost estimates below.)

Response: Cost estimates for control equipment were explicitly stated to be average unit costs for "model plants." While assessments by other parties (including NERA) have found these costs to be generally reasonable, the estimates are just average costs. The specific costs of installation at any given source, particularly in a retrofit situation, can differ, potentially by substantial amounts from the estimates provided. The costs, however, were chosen to be on the whole conservative (high). An explicit add-on penalty reflecting almost a 50 percent increase in the capital costs for any scrubbers retrofitted for meeting visibility regulations was incorporated into the analysis. Hence, the retrofit scrubber costs for powerplants was not solely based on the costs for putting scrubbers on a new powerplant.

Chapter 6 of the assessment addresses this issue, and stresses that cost estimates for NO_x control equipment in particular are especially uncertain. Given the nature of the analysis, and the expectation that site-specific analyses would be the part of any final rulemaking affecting specific sources, the average costs were deemed appropriate estimates for a preliminary assessment.

Comment: Atlantic City Electric challenged the use of coal prices from the ICF Coal and Electric Utilities Model for estimating the cost of control via conversion to low-sulfur coal. Atlantic City Electric claims to be facing substantially higher prices than estimated for the analysis because the availability of coal with low sulfur and an ash-fusion temperature low enough for a cyclone boiler is quite limited.

Response: Estimates of coal prices from the ICF Coal and Electric Utilities Model (CEUM) are subject to the same sort of site-specific considerations as mentioned above for control equipment. The CEUM price estimates do account for variation in sulfur content, heat content, and volatility among coal reserves. Prices for coals to satisfy demand constrained by other requirements, such as low-sulfur combined with a need for low ash-fusion temperatures with limited coal reserves could potentially result in higher coal prices than projected by the CEUM. Such an adjustment would be warranted in a more detailed analysis of specific compliance options at individual plants.

Comment: One data source not used in the analysis but considered important by five respondents is the list of sources compiled by the Federal Land Managers (FLM). Four of the comments indicated that the assessment was incomplete without consideration of the FLM's evaluations; one objected to the use of calculations of impairment rather than observations of impact to support visibility regulations.

Response: With few exceptions the sources responsible for visibility impairment according to the FLM are included in the

NEDS data base and have therefore been screened according to the assumptions used in this analysis. The sources compiled by the FLM serve as another approach to identifying sources potentially impacted by visibility regulations and are based on a different set of selection criteria than used in the assessment. The two efforts serve to compliment one another rather than being mutually exclusive.

Comment: Five comments questioned the preliminary assessment's interpretation of BART as other than NSPS, finding it in conflict with EPA's "Proposed Guidelines for Determining Best Available Control Technology for Coal-Fired Powerplants and Other Major Stationary Sources (Draft)."

Response: BART for the purpose of the assessment was defined as that technology necessary to roll back emissions to meet the assumed threshold values. The BART guideline document proposes that BART emission limits selected by the states that are less stringent than the NSPS limits must be justified. However, limits less stringent than NSPS are not prohibited. (See Section 4.9.4 for further discussion of BART guidelines.)

Comment: Four comments addressed the visibility impairment thresholds used in the analysis. Pacific Power and Light and Colorado-Ute Association considered the selection of the threshold levels somewhat arbitrary, noting that the interpretation of "perceptible impairment" is the subject of considerable debate. TRC and the Utility Air Regulatory Group (UARG) objected to the adjustment of the threshold levels without "sufficient" analytical justification.

Response: Aware of the controversy surrounding attempts to define "perceptible impairment," EPA selected two threshold values each for discoloration and visual range reduction to test for sensitivity of the results to different assumed levels of impairment. In the draft report, it was clearly noted that defining these threshold limits was critical and subject to many considerations.

Comment: Five comments contained objections to screening based on distances calculated from the source to the centroid of a Class I area. All of the objections stemmed from concern that using this assumption underestimated the number of sources potentially influencing the Class I areas. Some comments addressed the possibility that a source might have an effect on a large Class I area without affecting the centroid; others were concerned that protection of the Class I area's integral vistas was not assured by screening for protection of the centroid only.

Response: EPA shares the concern expressed over the proper use of the proposed distance criteria and the appropriate selection of the fixed centroid in each Class I area. These concerns are discussed in Chapter 6 of the assessment. The inclusion of alternative screening criteria which did not rely on the distance criteria was intended to mitigate some of the problems associated with centroid-to-centroid distance calculations.

Comment: Salt River Project objected to the generalized use of a 12.5 percent capital charge rate. SRP pointed out that the rate is very sensitive to utility financing practices as well as the underlying cost of money, and noted that a 12.5 percent rate is in the low range for specific western utilities.

Response: Consideration of individual methods of utility financing was beyond the scope of a preliminary analysis. The capital charge rate chosen was therefore not purported to be representative for any specific utility. Further, the capital charge rate used in the analysis was chosen to be conservative (high), and was based on utility financing costs for a private utility identified by the Electric Power Research Institute (EPRI). Note that the capital charge rate of 12.5 percent is in real terms and is much lower than the corresponding capital charge rate in nominal terms, which is on the order of 18 to 19 percent. Since all the associated capital costs were in real 1980 dollars the correct charge rate to use for the assessment is a real capital charge rate. For municipal and quasi-government utilities (TVA, Bonneville, and SRP), the utility financing costs would be lower than that used in the assessment. Therefore, the capital costs on an annualized basis included in the assessment would be overstating the costs to these public utilities. To be conservative (i.e., a bias toward overestimating the costs), only the capital charge rate for privately-owned utilities was used.

The following comments concern issues which the respondents consider an essential part of an economic assessment of the proposed regulations, but which were not addressed.

Comment: Six comments expressed concern that the methodology understated the potential impact of visibility regulations by ignoring any additional costs associated with protecting integral vistas as well as the specific Class I areas.

Response: The criteria outlined for the assessment specified the use of distances calculated to the Class I area's centroid. Chapter 6 of the assessment questions the appropriate application of the distance criteria when considering important integral vistas. However, since the issues associated with integral vistas, (i.e., whether these were to be incorporated into visibility regulations at all and how they were to be defined) were not resolved when the analysis was done, explicit consideration of such vistas was not incorporated into the preliminary assessment. Under the final regulations, the State may consider cost, energy and other relevant factors in determining the appropriate degree of protection for integral vistas.

Comment: Nine of the 22 comments critized the assessment for failing to include an estimate of the benefits to be derived from visibility regulations. Some of the comments challenged the ability of the proposed regulations to produce benefits warranting the expenditure of millions of dollars; others claimed that Congressional appropriations already expressed the taxpayers (low) valuation of aesthetic worth. All of the respondents felt that a benefits assessment was necessary to put the cost assessment into perspective.

Response: EPA agrees with the importance of assessing the benefits to be produced by any visibility regulations. Page 1-3 of the Introduction and Executive Summary stresses this importance and points out that visibility impairment causes different levels of concern for different Class I areas. However, no overall benefit assessment has been performed due to the case-by-case nature of the visibility program. As noted earlier in this section, benefit analyses will be made on a case-by-case basis as part of the BART demonstration.

Comment: The assessment understated the costs of imposing visibility regulations, according to three comments, because no secondary or tertiary economic impacts were analyzed. Among those potentially affected are fuel suppliers, ratepayers, tax payers supporting additional administrative staffs, and industries forced to relocate or reconsider expansion plans.

Response: The preliminary assessment does not consider economic impacts beyond the estimated capital and annualized costs for utilities identified for control, and the influence of these costs on utility electricity rates. The additional economic impacts associated with control of a particular source should be addressed in the site-specific analyses that will be conducted as part of the regulatory requirements.

Comment: Three respondents found the assessment to be deficient because no economic analysis was prepared to support development of each state's long-term strategy for protecting visibility in Class I areas.

Response: The report is explicit in stating that this analysis was prepared to support the initial regulations, which deal with near-field impairment that can be traced to a single existing source or group of sources. Other considerations with respect to visibility impairment, such as control of regional haze and any long-term strategies potentially to be imposed by state agencies were beyond the scope of this assessment.

Comment: Three comments cited the omission of any analysis supporting new source reviews as a shortcoming of the assessment.

Response: The focus of the assessment was an economic analysis of the costs for major existing stationary sources to comply with visibility regulations. Analysis to support new source reviews was not conducted as the cost is associated with the PSD program. The preamble to the regulations discusses the anticipated affects of the final regulations on new sources.

Comment: Three of the comments questioned the usefulness of ICF's findings because no other factors contributing to visibility impairment were considered. A fourth respondent came to a similar conclusion because of the omission of any consideration of regional haze.

Response: The assessment was prepared to support near-field impairment that can be traced to a single existing source or group of sources. Hence, the influence of other pollution sources to the extent that these sources contribute to regional haze problems were not considered. To the extent that these other sources affect the overall general background visibility levels, this effect to a certain degree was included in the ERT screening curves which account for regional variations in humidity, background visibility, windspeed, stability, and other meteorological conditions.

Comment: Twelve of the comments submitted included evaluations of the estimates of the costs of installing controls or initiating other control strategies. Eleven of the evaluations considered the estimates to be an understatement of the actual potential costs, due primarily to the use of inappropriate assumptions (see discussion above). One evaluation labeled the costs as overestimates.

Response: The cost considerations specific to each source assure that any estimate based on average unit costs in many instances could be wrong; some plants will be able to comply at lower costs and others at higher costs. However, on average these costs are likely to be representative of the total costs incurred.

Comment: Eleven respondents concluded that one or more sources had been screened incorrectly. Most of the comments concerned sources which had been named as possible contributors to visibility impairment. The objection was raised that inclusion in such a list of "offenders" forced the source to prove its innocence. Respondents who felt that their sources had been missed seemed somewhat concerned about the possibility of incurring costs at some later date, but primarily made the argument that missing sources led to an underestimate of the potential costs being assessed by EPA.

VEPCO pointed out specifically that Mt. Storm had been included in the analysis incorrectly because of an error in recording the initial date of operation for one of their boilers. VEPCO also stated that the distances to the affected Class I areas from Mt. Storm are wrong.

Response: The report emphasizes that those sources referred to as potentially affected by visibility regulations are identified only for the purposes of this analysis. The data sources and assumptions used determined the outcome of the screening process. Although every effort was made to minimize the bias created by the input assumptions, the uncertainties and limitations of the analysis were acknowledged in the first pages of the report.

Concerning the initial date of operation for the third unit at the Mt. Storm plant, the assessment stands corrected. The initial date of operation for this unit was that identified by the Department of Energy in its Inventory of Powerplant and Industrial Powerplants. Note that in correcting for this date of operation, the estimated impacts at Mt. Storm would be higher than indicated in the assessment. This is because the emissions from the third unit, having been exempted due to its age, were not included in the assessment. Failing to include this unit in the cost estimates understates both the estimates of visibility impairment and the costs for complying with the visibility regulations.

The distance calculations are taken from NEDS (not calculated from the accompanying map) and may be either (a) misleading, due to the use of centroid to centroid distances, or (b) wrong. Any future analysis regarding Mt. Storm will double-check the distance to the Class I area.

Comment: The assessment of the possible or probable control strategies was incorrect in at least three instances:

- Atlantic City Electric claimed that the use of low-sulfur coal was at best very expensive and at worst impossible because of the limited availability of low-sulfur, low-ash fusion coals.
- Jacksonville Electric claimed that their current fuel supplies for the Northside plant contain 1.8 percent sulfur, not 1.4 percent, which makes the assumed "costless" switch to 1.3 percent sulfur oil a very expensive strategy.
- Salt River Project claimed that the retrofit of NO_x control equipment postulated by ICF was either much more expensive than indicated or impossible when the existing equipment is incompatible with the equipment used to develop the cost estimates.

Response: Atlantic City Electric -- As mentioned previously, site-specific considerations such as the requirement for low-ash fusion, low-sulfur coal is an important consideration and could result in higher low-sulfur coal prices than used in the assessment. EPA recognizes that there are limited coal reserves of low-sulfur, low-ash fusion temperature coals and that the availability and likely costs of this coal for specific powerplants needs to be evaluated on a case-by-case basis.

Jacksonville Electric -- DOE's Cost and Quality of Fuels for Electric Utility Plants - 1979, which is prepared from utility submissions, lists the sulfur content of oil delivered to the Northside plant as 1.42 percent.

Salt River Project -- Chapter 6 of the assessment acknowledges that there is uncertainty inherent in the cost estimates for NO_x controls used in the analysis and that there is a debate about the applicability of specific NO_x retrofit equipment for specific boilers. Further, assessments of the technical feasibility of different options were not considered to be within the scope of the assessment.

Comment: Two respondents claimed that the estimates of visibility impairment presented in Chapters One and Two disagree with those presented in Chapter Three.

Response: The estimates of visibility impairment shown in Chapter Three are the correct estimates. The derivation of each estimate is presented in detail in the later sections of Chapter Three. The differences between the estimates shown in Chapter Three and those presented in Chapter Two arise because the more detailed calculations in Chapter Three take into account (1) adjustments to represent average daily emission; (2) planned improvements in pollution control equipment; and (3) intended changes in fuel purchases.

Comment: Pacific Power and Light questioned the estimated impacts of the Centralia plant on the Mt. Rainier Class I area. Their analysis of the assumed meteorological conditions, plume behavior, and elevation of the Class I area indicated that the impacts are more likely to be inconsequential.

Response: The estimated impacts of the Centralia plant were derived based on the screening curves, and rely on the assumptions about meteorology and plume behavior that were used to develop the curves. As mentioned in the preceding discussion of the screening curves, terrain was not considered in preparing the curves. The problems associated with inaccurate meteorological assumptions and with excluding terrain are highlighted by examples such as the Centralia/Mt. Rainier case. Adequate consideration of these site-specific conditions should be included in future analysis as part of a specific regulatory action or determination.

Comment: Colorado-Ute Electric Association took issue with the visibility impairment attributed to nitrogen oxides (NO_x) emissions from the Hayden plant. Colorado-Ute concluded that the estimates overstated actual emissions of nitrogen oxides from the Hayden plant two-fold.

Response: The NO_x estimates for the Hayden plant which were challenged by Colorado-Ute were calculated using AP-42 formulas. EPA acknowledges that the formulas may overstate emissions somewhat because there is no adjustment included for tangential firing. Such a consideration should be included in any more detailed site-specific analysis. Nonetheless, the emissions estimated from Hayden's one tangentially-fired unit would only be about 25 percent lower than the estimate made assuming front-firing using general NO_x emissions data often used for such powerplants. The perceived overstatement can more reasonably be attributed to a misinterpretation of the estimates. Maximum daily emissions rates (that is 100% output for 24 hours) were calculated, not an average annual or average daily rate. By using 1979 fuel data, average daily emissions rate is about one-half the maximum daily rate shown in the report. This is approximately the current rate suggested by Colorado-Ute.

4.12 IDENTIFICATION UNDER SECTION 169A(a)(2) OF MANDATORY CLASS I FEDERAL AREAS IN WHICH VISIBILITY IS AN IMPORTANT VALUE

The Utility Air Regulatory Group (UARG) and a few other commenters complained that the Administrator's November 30, 1979, identification of mandatory Class I Federal areas in which visibility is an important value under Section 169A(a)(2)[17] merely "rubber-stamped" the recommendations of the Secretary of the Interior. UARG, while recognizing that this action was "final," requested EPA to acknowledge that "the existing list of Visibility Areas . . . be reduced as appropriate, when facts so justifying are brought to the Administrator's attention."

As EPA noted in the preamble to the November 30, 1979, notice, the Administrator will revise the list on the basis of new information. 44 Federal Register 69123, col. 3. Revision to the final list promulgated November 30, 1979, is explicitly provided for in Section 169A(a)(2) itself ("From time to time the Secretary of the Interior may revise such identifications") and the Act's Conference Report ("The Administrator and the Secretary of Interior may update the applicable recommendations and list periodically when appropriate"). H. Rep. No. 95-564, 95th Cong., 1st Sess., 155 (1977). Thus any person who desires on the basis of new information to have the Administrator revise the list should administratively petition the Secretary of the Interior to recommend any such revision to the Administrator.

The several non-UARG commenters on this point seemed to imply that somehow the November 30, 1979, action could still be judicially challenged, either as part of a judicial challenge to the final regulations under § 169A(a)(4) for visibility protection or otherwise. This is patently wrong. The November 30, 1979, action was final action, clearly identified as such, that amended 40 CFR Part 81. Under Section 307(b)(1), any petition for reivew had to be filed within 60 days after November 30, 1979. Indeed, one such petition was timely filed challenging one of the identifications and EPA raised no argument that the complained-of action was not final.[18]

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[17] 44 Federal Register 69122.

Although EPA stated in its notice of the proposed list that it would consider no substantive issue relating to the list ripe for judicial review until the § 169A(a)(4) regulations are promulgated "since the effect of the identifications will remain largely uncertain until then," EPA abandoned this position in its notice of the final list. In the preamble to the final list, which throughout referred to the action as "final" and termed the list a "promulgation," the Administrator explicitly rejected the request of one commenter that promulgation of the final list be postponed so that it could be addressed together with the regulations proposed under Section 169(A)(a)(4) for protection of visibility. The Administrator explained:

> [S]uch an approach [deferring promulgation of the final list] would be contrary to the congressional scheme--clearly set out in section 169A--of promulgating the list of areas in advance even of the report to Congress containing the technical outline for the eventual visibility regulations. 44 Federal Register 69123, col. 3.

The Administrator noted that the economic effect of the regulations under § 169A(a)(4) cannot be evaluated until those regulations are proposed and promulgated, a time Congress contemplated would be after the final list under Section 169A(a)(2) was promulgated. 44 Federal Register 69123, col. 2.

Thus the list promulgated under Section 169A(a)(2) on November 30, 1979, was final Agency action, as UARG recognized, and under Section 307(b)(1) the time for filing a petition for review of the list has long since expired. Any person may, however, administratively petition the Secretary of the Interior to recommend to the Administrator that he revise the list.

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[18] See Chevron U.S.A., Inc. v. EPA, 5th Cir., No. 80-3081. Petitioners in this case also filed an administrative petition for reconsideration which EPA denied on October 3, 1980, 45 Fed. Reg. 65585. This notice, together with the preamble to EPA's November 30, 1979, final list of areas, answers completely the substantive and procedural objections raised by the above-noted commenters in the present rulemaking.

4.13 MISCELLANEOUS

Nonferrous Smelter Orders - There were five comments received concerning the control of emissions from nonferrous smelters in the Southwest. At least two of these commenters suggested inclusion of some requirement to reduce visibility impairment in a Nonferrous Smelter Order (NSO) [Section 119], while others said a smelter with an NSO should be exempt from any visibility requirement. Section 119 of the Act allows certain smelters that cannot afford the constant controls necessary to attain and maintain the SO_2 NAAQS to use supplementary control systems on an interim basis. The NSO program under Section 119 simply does not concern requirements for protection of visibility.

Reversibility of Visibility Impairment - There were a number of comments which brought up the fact that visibility impairment is a reversible phenomenon. Certain commenters also suggested delaying the final promulgation of these regulations since visibility impairment does not affect health or welfare of individuals. In fact, visibility is a "welfare" affect and there is no basis in law for EPA to ignore Congress' mandate to promulgate these regulations. The Agency agrees that visibility impairment is a reversible phenomenon; however, Congress was aware of this fact and nevertheless it established a two-year deadline for promulgating these regulations. This and the legislative history indicate the great importance Congress placed on protecting visibility.

Several commenters raised concerns over the apparent discrepancies between the "in existence" definition in the proposed regulations for visibility and the "in existence" definition in the proposed regulations for stack heights.

For the purposes of the visibility regulations in existence

> "means that the owner or operator has obtained all necessary preconstruction approvals or permits required by Federal, State, or local air pollution emissions and air quality laws or regulations and either has (i) begun, or caused to begin a continuous program of physical on-site construction of the facility or (ii) entered into binding agreements or contractual obligations, which cannot be cancelled or modified without substantial loss to the owner or operator, to undertake a program of construction of the facility to be completed in a reasonable time."

The proposed stack height regulations on the other hand define "in existence" as meaning "that stack height (of a stack) which has been constructed," and the commenters felt that "in existence" under § 169A should connote "complete construction."

The 1977 Amendments employed two concepts to describe the status of source construction: facilities or source on which construction had "commenced" and facilities "in existence." The phrase "in existence" is used in provisions dealing with PSD and visibility, as well as stack height.

For visibility protection, Section 169A(b)(2)(A) mandates an SIP requirement that each major stationary source "in existence" on the date of enactment of the Amendments, but which has not been in operation for more than fifteen years as of that date, must apply BART. In contrast to the provisions dealing with "in existence" Section 169(a)(2), a source which has "commenced construction" for PSD means a source that has obtained all necessary preconstruction permits and either begun physical on-site construction or entered into binding contractural agreements which cannot be cancelled without substantial loss to the source.

Since the 1977 amendments defined commence construction to include the acquisition of permits, the beginning of actual construction, etc., arguably "in existence" must mean more, and in fact for the purposes of Section 123 "in existence" has been taken to mean physically constructed.

Congress, however, stated repeatedly that the PSD and visibility programs should be harmonized to the extent possible. The effect of EPA's definition of "in existence" is to assure, as Congress intended, that a major source be subject either to BART under § 169A as an existing source, or to PSD as a new source. No commenter challenged this reasoning which EPA set out with its proposal. Under one commenter's approach, those sources which had commenced construction prior to August 7, 1977, but which were not physically "in existence" on that date, would not be subject to either the BART or the PSD requirement. As noted, the Agency believes that a source either is new (i.e., subject to PSD) or existing (subject to BART) and that it cannot be neither: therefore, sufficient reason exists for defining "in existence" differently for visibility than for stack heights. An additional reason for this difference is that in the stack height definition "in existence" was proposed in order to credit sources which raised their stacks or constructed tall stacks prior to December 31, 1970, such that they would not be subject to more retroactive requirements. However, BART by definition is retroactive.